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NEPAL SEED AND FERTILIZER PROJECT

Monitoring, Evaluation and Learning Plan

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2. ACRONYMS AND ABBREVIATIONS

4Rs	Right source, right rate, right time, right place
ADB	Asian Development Bank
AfSIS	Africa Soil Information Service
AO	Agreement Officer (USAID)
AOR	Agreement Officer's Representative (USAID)
CBSP	Community-based seed producer
CDCS	Country Development Cooperation Strategy
CDD	Crop Development Directorate (Nepal)
CEAPRED	Center for Environmental and Agricultural Policy Research, Extension and Development
CGIAR	Consultative Group on International Agricultural Research
CIMMYT	<i>Centro Internacional de Mejoramiento de Maíz Y Trigo</i> (International Maize and Wheat Improvement Center)
CSISA	Cereal Systems Initiative for South Asia (program)
DADO	District Agricultural Development Officer
DFID	Department for International Development (United Kingdom)
DO	Development Objective
DOA	Department of Agriculture (Nepal)
DSG	Disadvantaged Social Groups
FTF	Feed the Future
FY	Fiscal year
G2G	Government to Government
GIS	Geographic information system
GON	Government of Nepal
IFAD	International Fund for Agricultural Development
IFDC	International Fertilizer Development Center
IPNI	International Plant Nutrition Institute
IR	Intermediate Result
IRRI	International Rice Research Institute
ISF	International Seed Federation
ISFM	Integrated soil fertility management
ISRIC	International Soil Reference and Information Centre
KISAN	Knowledge Based Integrated Sustainable Agriculture and Nutrition (project)
ME&L	Monitoring, Evaluation and Learning
MIS	Management information system
MLT	Multi-location trial
MOAD	Ministry of Agricultural Development (Nepal)
MORCF	Market-Oriented Research Consultative Forum
MOU	Memorandum of understanding
MSMEs	Micro, small and medium enterprises
NARC	Nepal Agricultural Research Council
NARS	National Agricultural Research System(s)
NGO	Non-governmental organization
NSAF	Nepal Seed and Fertilizer (project)
ODK	Open Data Kit
PAC	Project Advisory Committee
PIRS	Performance Indicator Reference Sheet
PMC	Project Management Committee

PPP	Public-private partnership
R&D	Research and Development
SEAN	Seed Entrepreneurs' Association of Nepal
SMD	Soil Management Directorate (Nepal)
SME	Small and medium enterprises
SQCC	Seed Quality Control Center (Nepal)
Sub-IR	Sub-intermediate result
TOT	Training of trainers
TRP	Technology Refinement Platform
USAID	United States Agency for International Development
USG	United States Government
WBS	Work breakdown structure
WTP	Willingness to pay
ZOI	Zone of Influence

3. INTRODUCTION

The goal of the Feed the Future (FTF) initiative is to sustainably reduce global poverty and hunger, and the FTF Nepal Seed and Fertilizer project is designed to contribute to that goal by aligning with the FTF Nepal multi-year strategy and the Mission's Country Development Cooperation Strategy (CDCS). Specifically, the NSAF project goal is to build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal. The project will operate primarily by improving the capacity of both the public and private sectors in their respective roles in development and dissemination of improved technologies related to seed and fertilizer. Crucially, the project also endeavors to increase collaboration between both sectors such that the private sector enterprises increasingly rely on government institutions as sources of innovation and knowledge and the public sector recognizes private sector partners as robust conduits for extending knowledge and new technologies.

NSAF fully integrates the primary FTF goal and CDCS Development Objective (DO) 2, which is Inclusive and Sustainable Economic Growth to Reduce Extreme Poverty. The Project specifically integrates FTF Intermediate Result (IR) 2.1 (Improved agricultural productivity), IR 2.2 (Small enterprises opportunities expanded), and 2.4 ((Economic growth policy and performance improved). NSAF is aligned with the priorities and approaches articulated by the Government of Nepal's (GON) recently approved Agricultural Development Strategy (ADS), the Seed Vision 2025, and the endorsed action plan that emerged from the Ministry of Agricultural Development's (MOAD) 'Seed Summit' in September, 2015.

The FTF Nepal Seed and Fertilizer project activities will focus on strengthening the rice, maize, lentil, and high-value vegetable value chains in the FTF Nepal Zone of Influence (ZOI) districts as well as five earthquake-affected districts. Although NSAF's impacts are likely to spill over into other parts of the country, project activities are focused in the FTF Nepal ZOI (Zone of Influence) districts. After the successive strong earthquakes that struck the central mid-hills region of Nepal in April and May of 2015, the United States Agency for International Development (USAID) expanded the FTF 'zone of influence' to incorporate several of the most affected districts. NSAF aligns with this decision by programming in these districts. The districts selected are the following:

- 6 districts in the Far-Western Region: Achham, Baitadi, Dadeldhura, Doti, Kailali, and Kanchanpur;
- 10 districts in the Mid-Western Region: Banke, Bardia, Dailekh, Dang, Jajarkot, Pyuthan, Rolpa, Rukum, Salyan, and Surkhet;
- 4 districts in the Western Region: Arghakhachi, Gulmi, Kapilvastu, and Palpa;
- 5 earthquake-affected districts (Sindhuli, Kavre, Makwanpur, Nuwakot, and Sindhupalchowk) in the Central Region.

3.1 PROJECT APPROACH

To achieve its goal of improving Nepal's seed and fertilizer value chains, NSAF will work to increase demand for new, client-oriented and science-led innovations through market development and

training. At the same time, NSAF will stimulate private investment that will drive success within and beyond the project lifecycle. As a result, strengthened seed and fertilizer value chains will improve adoption of elite and adapted seeds and integrated soil fertility management (ISFM) technologies for a range of beneficiaries, including women headed households and socially disadvantaged groups. By strengthening enterprises, economic benefits will also be generated for small business owners and sole entrepreneurs.

An enabling environment consisting of a supportive policy, legal and regulatory environment is a necessary condition for sustainable growth of the seed and fertilizer sectors. The policy and support services environment affects the entry of new businesses, growth and competitiveness of the existing businesses, and determines access to better quality seeds and soil fertility enhancing technologies by the farmers. Currently, there are a number of areas where reforms are necessary in order to facilitate/increase seed and fertilizer trade as well as promote the growth of seed and fertilizer sectors in Nepal. While these issues will be broadly addressed through existing USAID funded project implemented by the International Food Policy Research Institute (IFPRI), the FTF Nepal Seed and Fertilizer project will coordinate with IFPRI to address issues particularly related to the seed and fertilizer business-enabling environment. This project will complement IFPRI's policy work by strengthening seed and establishing fertilizer trade associations that will improve the business climate for investment.

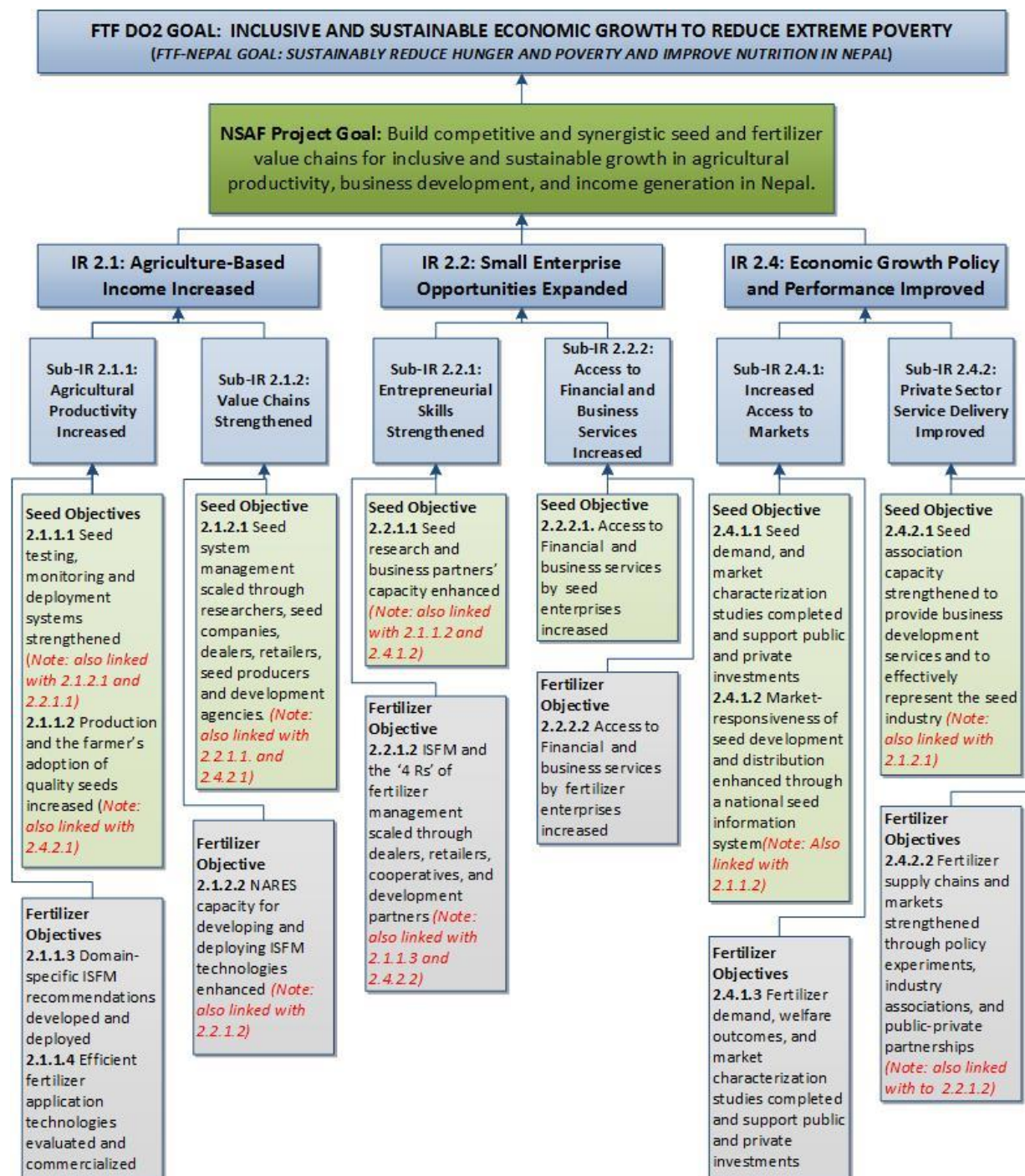
The project will be implemented by a consortium of partners, with the International Maize and Wheat Improvement Center (CIMMYT) having overall responsibility for coordination. In the seed sector, crop-specific activities will be led by four institutions: International Rice Research Institute (IRRI) for rice, Nepal Agricultural Research Council (NARC) for lentils, Center for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED) for vegetables (tomato, onion and cauliflower) and CIMMYT for maize. Cross-cutting collaborations will be established with the commodity research programs and research stations of NARC, Seed Quality Control Center (SQCC), Crop Development Department (CDD), and the Department of Agriculture (DOA). Additional partners will include seed companies, non-governmental organizations (NGOs), and community-based seed producer groups (CBSPs).

Similarly for fertilizer, a host of national (e.g., NARC, Soil Management Directorate [SMD]) and international organizations (e.g. International Fertilizer Development Corporation [IFDC], International Plant Nutrition Institute [IPNI], IRRI) will be core partners. In order to effectively reach women farmers and marginalized social groups, the project will also seek value-driven collaboration with USAID's development partners in Nepal, like the Knowledge Based Integrated Sustainable Agriculture and Nutrition (KISAN) project to raise awareness of and access to agricultural inputs and services among the project's target beneficiaries.

USAID is also making companion investments to strengthen the seed and fertilizer system through a Government-to-Government (G2G) funding mechanism with MOAD. NSAF Project Management team has initiated discussions with MOAD departments for collaborative activities. The formation of an inclusive project management and advisory committee will ensure strong coordination among partners.

The project's results framework (see Figure 1) illustrates how the project's thirteen Objectives contribute towards the FTF Sub-Intermediate Results (Sub-IRs), Intermediate Results (IRs), Project Goal, and FTF Development Objective (DO) 2 Goal.

Figure 1: FTF NSAF Results Framework



Seed sector strategy

The Seed Component will build the capacity of public and private sectors on market-oriented variety development (including hybrids), technologies for quality seed production, and seed business development. A foundational component of this approach will be facilitation of public-private partnerships that link national champions with international research organizations and businesses. The project will develop a platform for collaborative tripartite research by NARC, relevant members of the Consultative Group for International Agriculture Research (CGIAR) institutions, and private seed companies. Moreover, it will strengthen local seed production capacity, by identifying suitable geographies for seed production, seed producers' network and strong linkages with the market.

The success of the seed system component of the NSAF project depends on the following assumptions that underpin the seven Seed Objectives:

- Through capacity development and strategic collaborations with international research and development (R&D) institutions, NARC and seed company partners can adopt new market-oriented research and business approaches to effectively deploy improved crop (rice, maize, lentil and high-value vegetables) varieties acceptable to the farmers, and augment seed supplies towards higher yields and higher profitability at the farm level.
- Significant efficiency in the seed systems can be achieved by strengthening the capacity of public and private sector actors in technology development and dissemination, seed production and seed marketing for sustaining the benefits to farming community in Nepal.
- Seed production and quality assurance training, technology demonstrations, and market development efforts will enhance the supply and demand for quality seeds in Nepal.
- Coordinated advocacy by industrial associations would create a conducive environment for policy support, financial investment and business collaboration.

Fertilizer sector strategy

The ISFM component (henceforth referred to as the "Fertilizer Component") is predicated on four related assumptions and areas of activity. First, the project will work with the National Agricultural Research and Extension System (NARES) partners (e.g. NARC's Soils Division and the Soil Management Directorate [SMD]) to develop new soil fertility management recommendations that are efficient, scalable, and suited for different types of farmers. Second, the project will work to commercialize precision fertilizer application technologies that will form the basis of new small businesses. Third, the FTF Nepal Seed and Fertilizer project will work with the Department of Agriculture along with fertilizer importers/retailers and cooperatives to generate awareness of the yield and economic value of ISFM technologies, thereby building demand for high-quality fertilizers and the capacity of the private sector to deliver them. Training in the '4Rs' of nutrient stewardship (i.e. right source, right rate, right time, right place) will underpin this approach. Lastly, the project will support MOAD to explore opportunities for 'crowding in' private sector investments in fertilizers by restructuring existing fertilizer subsidy programs.

The success of the fertilizer sector strategy of the project hinges therefore on the following four core assumptions:

- Through capacity development and strategic collaborations with advanced institutions, NARES partners can adopt new research approaches and devise practical recommendations for integrated soil fertility management that are scalable in Nepal context, leading towards higher yields and higher profitability at the farm level.
- Significant gains in fertilizer use efficiency can be achieved with commercialization of affordable and precise application technologies.
- Fertilizer dealer training, technology demonstrations, and market development efforts will increase the supply and demand for quality fertilizers in Nepal.
- By re-structuring government support programs to subsidize farmer participation in markets, private sector investments in fertilizer import, distribution, and quality control systems will increase.

These assumptions underpin the formulation of the project's seven Fertilizer Objectives that will catalyze the sustainable adoption of integrated soil fertility management (ISFM) practices at scale in the FTF zone and among selected earthquake-affected districts in Nepal.

3.2 DEVELOPMENT HYPOTHESES AND THEORY OF CHANGE

The overall purpose of the NSAF project is to build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal. Through interventions at different points along the seed and fertilizer value chains, NSAF will help overcome bottlenecks to adoption of elite and adapted seeds and integrated soil fertility management (ISFM) practices. The project will thereby contribute to longer-term outcomes such as improved productivity of targeted crops, increased agriculture-based income, greater opportunities for small businesses in the agricultural sector, and eventually inclusive sustainable economic growth, reduced poverty, and reduced hunger.

The project will strengthen seed and fertilizer value chains to increase availability of and access to improved seed and ISFM technologies by beneficiary farmers, and thereby catalyze increased adoption. *The theory of change that underlies the design of NSAF is that if the project can build competitive and synergistic seed and fertilizer value chains by strengthening key points in the public and private sectors, then Nepal will see inclusive and sustainable growth in its domestic productivity, business development and income generation, across its agriculture sector, and thereby enhance food security.*

The success of the NSAF project depends on the following six core development hypotheses that underpin the project Results Framework (Figure 1):

Development Hypothesis A: If the public and private partners in Nepal's seed and fertilizer value chains strengthen their capacities to develop and deploy seed and ISFM technologies, **then** Nepal's agricultural productivity will be increased.

Development Hypothesis B: If scaling intermediaries in Nepal (e.g., agricultural retailers and cooperatives, extension agents, etc.) are trained on ISFM and the 4Rs of fertilizer management (right source, right rate, right time, right place), **then** Nepal's fertilizer value chain will be strengthened.

Development Hypothesis C: **If** seed value chain researchers and business partners in Nepal are able to increase their capacities through technical and business training and through improved understanding of the seed sector competitive landscape, **then** the entrepreneurial skills of Nepalese seed businesses will be strengthened.

Development Hypothesis D: **If** Nepalese seed enterprises receive mentorship on business plan development and finance **and** financial institutions and investors are better informed about seed and fertilizer markets, **then** access to financial and business services will be increased.

Development Hypothesis E: **If** seed development and distribution achieve enhanced market-responsiveness through a national seed information system, **and** public and private investors are better informed about fertilizer demand, welfare outcomes, and market characteristics, **then** access to markets by different value chain stakeholders will be increased.

Development Hypothesis F: **If** seed associations strengthen their capacity to provide business development services and effectively represent the seed industry, **and** fertilizer markets strengthened through policy experiments, industry associations, and public-private partnerships, **then** private sector service delivery will be improved.

These six Development Hypotheses underpin the six Sub-Intermediate Results (Sub-IRs) and three Intermediate Results (IRs) that NSAF expects will lead towards achieving NSAF's overall goal of building competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

4. GUIDING PRINCIPLES

The monitoring and evaluation (M&E) plan for the project emphasizes the following areas: (1) reporting on project activities and outputs in a timely manner; (2) tracking progress against expected project outputs; (3) effectively integrating and aligning project activities and staff from diverse partner institutions; (4) taking collective actions to refine and improve project design and implementation, as and when/where needed and (5) communicating the assessments and learning opportunities to project partners, stakeholders, the donors and the for the benefit of other current and future projects. The ME&L Plan envisages learning and building on best practices and established quality control measures of CIMMYT, as needed, to the project context and needs.

The project will establish close coordination with the ongoing USAID funded projects presently underway in Nepal, to harvest the synergistic impact of joint activities and maximize learning opportunities. The project leadership will also work with other funding agencies like the Asian Development Bank (ADB), the International Fund for Agricultural Development (IFAD), and the U.K.'s Department for International Development (DFID), who have funded or are likely to fund projects related to seed and fertilizers for collaboration and additional funding resources. The Monitoring, Evaluation and Learning (ME&L) Specialist will consult with USAID/Nepal to ensure cross-learning and synergy with related FTF activities like KISAN, which reports on many of the same indicators, has an extensive monitoring system across its working areas, and has an existing WIKISAN database and other templates and tools that could be adapted for use in NSAF. Similar

linkages will be explored with projects like High Mountain Agriculture and Livelihood Improvement, Raising Incomes of Small and Marginal Farmers, Agriculture Sector Development Program funded by ADB, Improved Seeds for Farmers, Western Uplands Poverty Alleviation Project and High-Value Agriculture funded by IFAD, Project for Agriculture Commercialization and Trade (PACT) funded by World Bank, and similar projects.

The project Results Framework (Figure 1) illustrates how the thirteen NSAF Objectives contribute to specific FTF Sub-Intermediate Results (Sub-IRs), Intermediate Results (IRs), and the Project Goal. This is aligned with a more detailed Work Breakdown Structure (WBS; see “Annex 3: Work Breakdown Structure”) which maps specific project Activities and Sub-Activities to NSAF Objectives. The Annual Work Plans (AWP) and project budget together describe how the project Activities will convert inputs (personnel, budget and partnerships) into results, as defined by clear milestones and targets laid out in this ME&L plan. The ME&L activities will include regular review of attainment of these milestones, analysis of any divergence, suggested measures for real-time corrective action, and confirmation of development hypotheses (see the section, “Development hypotheses and Theory of Change”, below) to capture lessons for future initiatives.

For projects like NSAF that seek to play a catalytic role and achieve impact at scale through public and private sector partners, conventional approaches to impact evaluation (e.g. baseline, end-line, and midline surveys in ‘intervention’ and ‘non-intervention’ areas) may not be adequate, largely because the geographies for impact are difficult to predict and vary by technology. In CIMMYT’s other regional projects like the Cereal Systems Initiative for South Asia (CSISA) project, we have devised a different approach based on indirect methods, such as business performance monitoring of service providers and input dealers, and recurrent village surveys at reference sites. In combination with special studies that characterize technology performance in farmers’ fields, the NSAF project will employ ‘credible inference’ techniques to ballpark both the uptake and impacts associated with different technologies. In combination, these methods permit timely insights for learning and reporting. In addition to in-depth impact studies (e.g. in the form of working papers, journal articles, contributions to annual reports etc.), the project will measure success against selected USAID standard indicators.

As the project’s level of impact moves from the field to landscape scale, new tools are required to detect possible changes for monitoring, internal learning, and evaluation. CIMMYT has teamed up with Oak Ridge National Laboratory and the GEOGLAM initiative to devise the Landscape Crop Assessment Tool (LCAT) concept. Currently under development, LCAT will leverage ‘real time’, remotely sensed information and geo-spatial analysis to aid certain types of technology adoption assessments, targeting and crop performance forecasting.

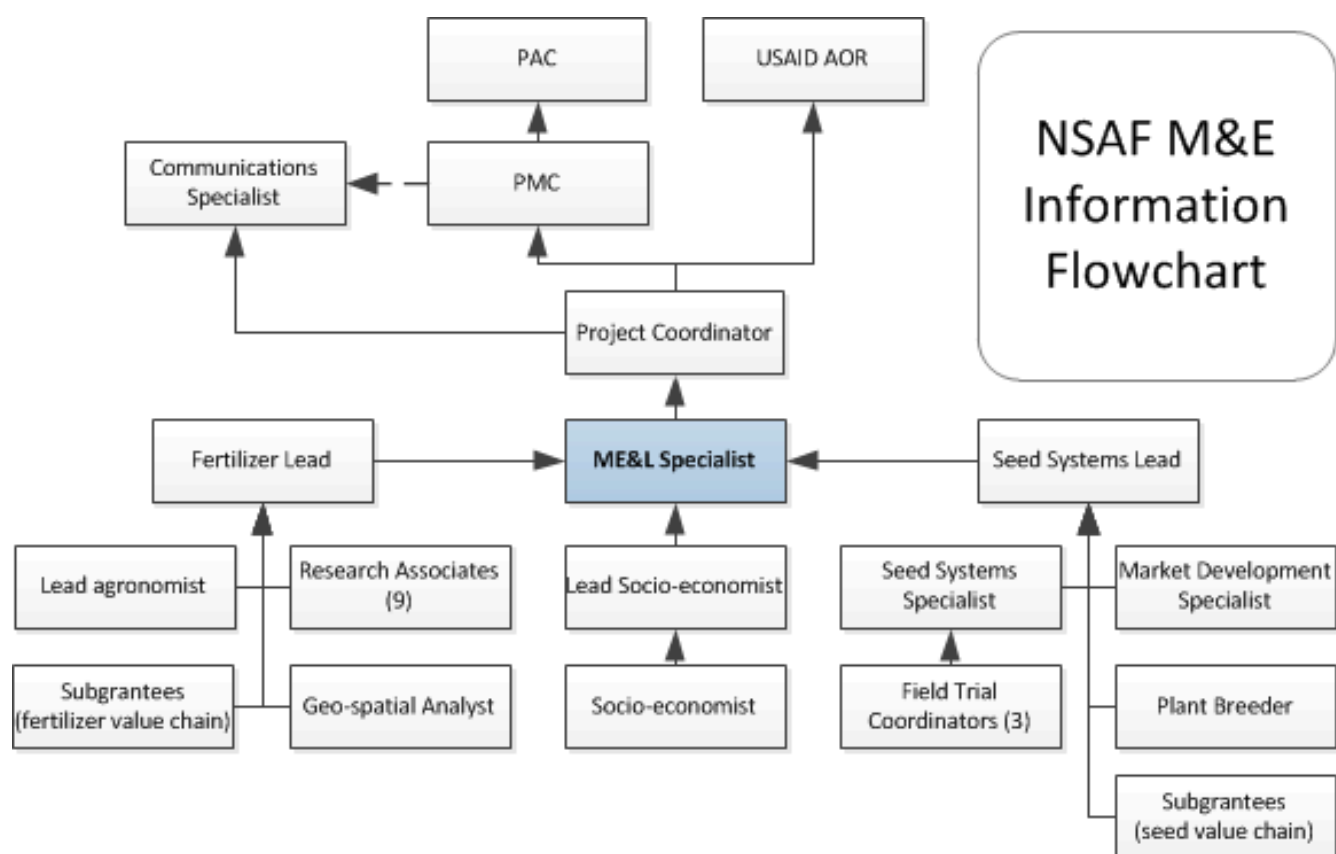
5. MONITORING AND EVALUATION APPROACH

5.1 MONITORING AND EVALUATION STRUCTURES AND FUNCTIONS

The ME&L Specialist for the project provides vision for the overall ME&L strategy and guides the field level staff who will be involved in overall monitoring at the field level. The Project Coordinator supervises the ME&L Specialist. Both are responsible to prepare reports i.e. Quarterly, Biannual,

and Annual Report. Together with both the leads for Seed and Fertilizer, the ME&L Specialist will guide the process of developing annual work plan (AWP). The project's nine Research Associates will be directly responsible for much of the data collection in the field. As most of the data entry (regular monitoring data) will be done in CIMMYT's Open Data Kit (ODK) database, the ME&L Specialist will closely work with the CIMMYT Nepal's database administrator for smooth implementation of the NSAF project's data entry. Research Associates posted in the field offices will ensure preservation of the hard copies of data collection tools in the fields while the ME&L Specialist will ensure central preservation of both soft and hard copies of data.

Figure 2: Flowchart for ME&L information of NSAF project



While the ME&L specialist is the only project team member dedicated entirely to ME&L activities Table 1 below outlines the specific roles and responsibilities in terms of ME&L activities of the different team members.

Table 1: ME&L Roles and Responsibilities

ME&L Specialist	<ul style="list-style-type: none"> • Overall coordination of ME&L activities • Oversee implementation of ME&L Plan • Update ME&L Plan as required • Train project team members and partners on their ME&L responsibilities • Ensure data is collected for all relevant indicators • Develop and disseminate standard templates for data collection and reporting • Synthesize and analyze ME&L data • Monitor progress towards targets and communicate any variances to Project Coordinator and appropriate team members • Consult as required with Socioeconomics Lead regarding data collection by any consultants hired as enumerators on a short-term basis • Upload data into USAID databases (FTFMS, TraiNet, and AT+) on a timely basis • Data cleaning (in consultation with Socioeconomics Lead, as necessary) • Ensure that lessons learned through the project are captured and (in coordination with Communications Specialist) communicated to internal and external stakeholders through appropriate channels
Project Coordinator	<ul style="list-style-type: none"> • Ensure ME&L activities are captured in Annual Work Plans • Monitor progress of planned ME&L activities to ensure timely implementation • Ensure corrective measures are applied as needed to stay on schedule • Consolidate inputs for technical reports, including ME&L information • Ensure that variances are systematically captured, analyzed, and coordinate identification and implementation of necessary corrective measures
Project Management Committee (PMC)	<ul style="list-style-type: none"> • Analyze performance variances, identify necessary corrective measures and oversee their implementation • As required, escalate any issues to the PAC
Project Advisory Committee (PAC)	<ul style="list-style-type: none"> • Analyze issues escalated by the PMC, identify necessary corrective measures and oversee their implementation

Seed Systems Lead and Fertilizer Lead	<ul style="list-style-type: none"> • Ensure that the staff who report to them collect and report data according to specifications set by ME&L Specialist • Provide technical input regarding analysis of data • In coordination with ME&L Specialist, set targets for • Assist in analysis of any variances against established performance targets • Validate technical reports from subgrantees
Research Associates (9 total, under both Seed and Fertilizer components)	<ul style="list-style-type: none"> • Collect data according to specifications provided by ME&L specialist • Entering data into standard templates and sending to ME&L Specialist for further processing
Field Trial Coordinators (3 total)	<ul style="list-style-type: none"> • Collect data according to specifications provided by ME&L specialist • Entering data into standard templates and sending to Seed Systems Specialist for collation and validation
Seed Systems Specialist	<ul style="list-style-type: none"> • In consultation with ME&L Specialist and Seed Systems Lead, coordinate collection of data by Field Trial Coordinators as required on relevant indicators • Consolidate and validate data collected by Field Trial Coordinators • Report relevant data to Seed Systems Lead for further processing
Plant Breeder	<ul style="list-style-type: none"> • In consultation with ME&L Specialist and Seed Systems Lead, collect data as required on relevant indicators and send to Seed Systems Lead for validation and consolidation
Market Development Specialist	<ul style="list-style-type: none"> • In consultation with ME&L Specialist and Seed Systems Lead, collect data as required on relevant indicators and send to Seed Systems Lead for validation and consolidation
Lead Agronomist	<ul style="list-style-type: none"> • In consultation with ME&L Specialist and Fertilizer Lead, collect data as required on relevant indicators and send to Fertilizer Lead for validation and consolidation
Geo-spatial Analyst	<ul style="list-style-type: none"> • Provide consultation to ME&L Specialist on geo-referencing tools for data collection and analysis • Assist with spatial analyses of ME&L data

Lead Socio-economist (assisted by Socio-economist)	<ul style="list-style-type: none"> • Provide technical oversight and consultation to ME&L specialist, especially in regards to design of survey tools • Conduct regular Data Quality Assessments and spot checks (with external support if and when necessary) • Coordinate data collection by any consultants hired as enumerators on a short-term basis, in consultation with Seed and Fertilizer Leads and ME&L Specialist
Communications Specialist	<ul style="list-style-type: none"> • Coordinate the communication of lessons learned through the project to internal and external stakeholders through appropriate channels
Subgrantees	<ul style="list-style-type: none"> • Provide technical reports on respective activities according to specified formats

5.2 INDICATORS, BASELINE AND TARGETS

To measure project performance, the ME&L system suggests detailed list of FTF Standard Indicators and how they map to the thirteen NSAF Objectives (Ref. Feed the Future Indicator Handbook [Updated June 2016] and the Country Development Cooperation Strategy FY 2014-2018). A total of 12 FTF Standard Indicators have been identified as relevant to this project. Table 2 provides a summary of key information on selected project indicators, while additional details may be found in Annex 1: Performance Indicators Tracking Table (PITT) and Annex 2: Performance Indicator Reference Sheets.

Table 2: Summary of Indicators and targets

FTF Indicator and indicator number		Indicator category & Type	Data, Baseline values, data sources and disaggregation	Overall (Life of Activity) Target
IR 2.1: Agriculture-Based Income Increased				
Sub-IR 2.1.1: Agricultural Productivity Increased (Note: Covers FTF IR 1: Improved Agricultural Productivity & Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity)				
1	Number of farmers and others who have applied improved technologies or management practices with	IM- RAA/WOG; Outcome	Data: Total number of direct beneficiaries	Seed: 37,200 Fertilizer: 700
			Baseline: Year 1 survey	

FTF Indicator and indicator number		Indicator category & Type	Data, Baseline values, data sources and disaggregation	Overall (Life of Activity) Target
	USG assistance (EG.3.2-17; formerly 4.5.2[5])		Data Source: Sample survey of direct beneficiaries, activity or association records, farm records Disaggregated by: Value chain actor type; Technology type; Sex; Caste/Ethnicity; Commodity	
2	Farmer's gross margin per hectare obtained with USG assistance (EG.3-6; formerly 4.5.[16])	IM-RAA; Outcome	Data: Increment in Gross margin (% increase) US\$/ha: Baseline: Year 1 survey Data Source: Sample surveys; data collection through producer organizations or farm records, routine activity records Disaggregated by: Targeted commodity; Sex; Caste/ethnicity	Seed: 30% Fertilizer: 25%
Sub-IR 2.1.1: Agricultural Productivity Increased (Note: Covers FTF IR 1: Improved Agricultural Productivity & Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation productivity)				
3	Number of hectares under improved technologies or management practices with USG assistance (EG.3.2-18; formerly 4.5.2[2])	IM-RAA/WOG; Outcome	Data: Area of land (ha) Baseline: Year 1 survey Data source: Sample survey	Seed: 35,000ha Fertilizer: 15,000ha

FTF Indicator and indicator number		Indicator category & Type	Data, Baseline values, data sources and disaggregation	Overall (Life of Activity) Target
			Disaggregate by: Technology type; Sex; Caste/ethnicity; Commodity	
Sub-IR 2.1.2: Value Chains Strengthened(Note: covers IR 1 Improved Agricultural Productivity and Sub IR 1.1 Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity)				
4	Number of for-profit private enterprises, producers organizations, water users associations, women’s groups, trade and business associations and community-based organizations (CBOs) that applied improved organization-level technologies or management practices with USG assistance (EG.3.2-20; formerly 4.5.2[42])	IM- RAA/WOG; Outcome	Data: Number of organizations	33
			Baseline: 0	
			Data Source: Activity records	
			Disaggregated by: Type of organization	
Sub-IR 2.1.2: Value Chains Strengthened (Note: covers IR 1 Improved Agricultural Productivity and Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation)				
5	Number of technologies or management practices under research, under field testing, or made available for transfer as a result of USG assistance (EG.3.2.-7; formerly 4.5.2[39])	IM-RAA; Output	Data: Number of technologies	Seed: Phase I- 1790; Phase II- 910; Phase III- 254 Fertilizer: Phase 1- 144; Phase II- 48; Phase III- 12
			Baseline: 0	
			Data Source: Activity records	
			Disaggregated by: Technology development phase	
IR 2.2: Small Enterprise Opportunities Expanded				

FTF Indicator and indicator number		Indicator category & Type	Data, Baseline values, data sources and disaggregation	Overall (Life of Activity) Target
Sub-IR 2.2.1: Entrepreneurial Skills Strengthened (Note: Covers FTF IR 3: Increased investment in agriculture and nutrition related activities)				
6	Number of public-private partnerships formed as a result of USG assistance (EG.3.2-5; formerly 4.5.2[12])	IM-RAA; Output	Data: Number of PPP formed	2
			Baseline: 0	
			Data source: Observation and records of partnerships created	
			Disaggregated by: Partnership focus	
Sub-IR 2.2.1: Entrepreneurial Skills Strengthened (Note: Covers FTF IR 1: Improved Agricultural Productivity and Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity)				
7	Number of individuals who have received USG-supported degree-granting agricultural sector productivity or food security training (EG.3.2-2; formerly 4.5.2[6])	IM-RAA; Output	Data: Individuals receiving training	5
			Baseline: 0	
			Data Source: NSAF training records	
			Disaggregated by: Sex; Caste/ethnicity; Duration	
8	Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (EG.3.2-1; formerly 4.5.2[7])	IM-RAA/WOG; Output	Data: Individuals receiving training,	Seed: 3,038 Fertilizer: 615
			Baseline: 0	
			Data Source: NSAF training records	
			Disaggregated by: Type of individual (i.e., economic sector); Sex; Caste/ethnicity	

FTF Indicator and indicator number		Indicator category & Type	Data, Baseline values, data sources and disaggregation	Overall (Life of Activity) Target
9	Number of for-profit private enterprises (for profit), producers organizations, water users associations, women’s groups, trade and business associations, and community-based organizations (CBOs) receiving USG food security related organizational development assistance (EG.3.2-4; formerly 4.5.2[11])	IM- RAA/WOG; Output	Data: Number of private organizations	Seed partners:11 CBSP groups: 22 NGOs: 11
			Baseline: 0	
			Activity records of training and various USG assistance	
			Disaggregate by: Type of organization; New/Continuing	
Sub-IR 2.2.2: Access to Financial and Business Services Increased AND Sub-IR 2.4.2: Private Sector Service Delivery Improved				
10	Number of micro, small, and medium enterprises (MSMEs), including farmers, receiving agricultural-related credit as a result of USG assistance (EG.3.2-3; formerly 4.5.2[30])	IM-RAA; Output	Data: Number	11
			Baseline: 0	
			Data Source: Activity records, MSME financial records, etc.	
			Disaggregate by: Size; Sex and caste/ethnicity of owner/producer	
11	Number of firms receiving USG-funded technical assistance for improving business performance (EG.5.2-1)	IM-O; Output	Data: Number of firms	Seed:11 Fertilizer: 355
			Baseline: 0	
			Data Source: Training participant records	
			Disaggregate by: Type of firm; Duration	
IR 2.4: Economic Growth Policy and Performance Improved				

FTF Indicator and indicator number		Indicator category & Type	Data, Baseline values, data sources and disaggregation	Overall (Life of Activity) Target
Sub-IR 2.4.1: Increased Access to Markets				
12	Value of small-holder incremental sales generated with USG assistance (EG.3.2-19; formerly 4.5.2[23])	IM- RAA; Outcome	Data: Volume (tons) & value (US\$) of incremental sales by direct beneficiary	TBD after baseline
			Base line: First reporting year sales	
			Data Source: Sample survey of farmer beneficiaries, from recorded sales data by agrovets, MSMEs	
			Disaggregate by: Commodity; Commodity group	

5.3 DATA COLLECTION AND MANAGEMENT

GEO-SPATIAL DATA COLLECTION

NSAF project has identified 12 FTF Standard Indicators based on which data collection formats will be developed. By the end of September 2016, all the data collection tools will be designed and developed. Both the seed and fertilizer components have common indicators i.e. Land and area coverage, Training etc. Results for both the components will be managed through common data collection tools. Few forms to capture geo-spatial data are as follows:

Sign-up sheet: This format will be designed and develop in such a way that it will be able to capture area wise information on Farmers and technology. Through this form both Land (EG.3.2-18) and farmers (EG.3.2-17) will be captured. The data will be collected by season. It will have all the prescribed disaggregation per the Performance Indicator Reference Sheets (PIRS). The data collection will be done for 100% of farmers and land surveyed by the project staff. For all cases, GPS coordinates will be captured through which the data will be set to be presented on maps.

Event Register: This form will to capture information on all short term training (EG.3.2-1). It will capture all required disaggregation as defined in the relevant PIRS (see Annex 2: Performance Indicator Reference Sheets) such as sex, caste/ethnicity and other dimensions. This form will be utilized by the facilitator/observer during the training session in case of short-term training and in case of long term training the format will be filled-up prior to enrolling into a long term training

program. This data will be reported biannually. For the short-term training events, all the GPS will be collected to plot the capacity strengthening components visible by areas.

TRP/MLT Checklist: This checklist will be used in relation to the project's Technology Refinement Platforms (TRPs) and Multi-Location Trials (MLTs) and will be designed and developed in such a way so as to provide info as a Gantt chart to display progress of each phase in terms of reporting against indicator EG.3.2-7.

Moreover the following forms will also be taken into consideration:

- Producer Performance Monitoring form: This will list the required parameters for measuring producer group performance during reporting periods. The information collected from this form might be useful for additional socioeconomic or other relevant surveys.
- Private sector Performance Monitoring form: This will list the required parameters for measuring private sector performance during reporting periods. Annual performance survey will be conducted by third party survey firm, which will also examine the investment status by the private sector.

Orientation on the data collection tools: The ME&L Specialist will train project and partner staff on data collection forms, checklist and geo-referencing tools (GPS and Google Earth). Training of trainers (TOT) will be provided to key field office personnel to maintain overall data quality. Training will be provided as soon as possible after hiring or partnering and development and approval of all tools. Refresher courses will be provided as needed based on data quality issues identified through the DQA process (such as spot checks and database queries) during the project period.

MANAGEMENT AND GEOGRAPHICAL INFORMATION SYSTEMS (MIS AND GIS, RESPECTIVELY)

A web-based application will be developed for the NSAF project, drawing upon examples from the KISAN project (WIKISAN) and/or CIMMYT-Bangladesh. At CIMMYT-Bangladesh, a simple, interactive database system with user-friendly interfaces has been developed for managing and maintaining data collected at the field level. It has customized features to help monitoring the progress made by partner organizations against the set targets and to generate reports in tabular and graphical forms. CIMMYT-Bangladesh database has two deployment environments: the web application (cloud app model) and the client-server (desktop) solution. Users of the web application can view, edit, and delete data directly in their web browser with appropriate access rights. On the other hand, the client-server solution is designed for checking the quality of the data and generating detailed management and donor reports. The databases have customized features to help monitor progress made by partner organizations against established targets, and to generate reports in tabular and graphical forms. Data will be stored in an easily accessible and systematic manner so that CIMMYT can use the data to generate maps using Google Earth, ArcView, ArcGIS, PowerMap, QGIS, etc.

ADMINISTRATION OF THE SYSTEM: INCLUDING LICENSING ISSUES

At least one license of Office 365 (E3 is recommended for normal use but E5 will give us more options to visualize data as it comes with BI tools) will be required to purchase. As per Microsoft's Page 19 of 97

current policy as many as 500 external users can have access to a cloud database without purchasing an Office 365 license for them.

DATA ENTRY

The system shall be set up so as to permit online data entry by field staff (Research Associates, part-time enumerators, etc.) and other project team members as appropriate. The ME&L Specialist will be in charge of setting the calendar and coordinating data upload to monitoring systems in line with the reporting schedule. Further details about the modalities of data entry will be established as a matter of priority upon the onboarding of incoming ME&L Specialist and Project Coordinator.

STORAGE AND SECURITY PLAN

Data will be stored in an SQL Azure database on Microsoft Cloud (there is a 1 GB limit for a single database), which will be automatically backed up daily, with more frequent manual back-ups as required. Access can be restricted based on user profile parameters, such as status as partner organization or based on geographical area. The system can be configured with more or less complex or stringent security as required.

USAID/Nepal requires reporting of disaggregates for beneficiaries by age, gender, caste/ethnic affiliation (Dalit, Muslim, Brahmin/Chhetri, Newar, Janajati, and other). Other indicators require other types of disaggregation (e.g. technology type, commodity, new/continuing). CIMMYT will carefully design the data collection forms to ensure compliance with the PIRS. Disaggregation requirements for each indicator are listed in Annex 2: Performance Indicator Reference Sheets.

5.4 SAMPLING APPROACH

The NSAF rural household beneficiary population will be over 50,000 farmers over 5 years. As this project lacks direct contact with the project beneficiaries, NSAF will follow a two-stage cluster design with a listing operation and systematic selection of beneficiaries for household-level and/or farmer group data collection. At the first stage, NSAF will select the cluster frame (consisting of a complete set of project implementation clusters) for sample selection at the first stage. All the market intermediaries in the selected cluster will be identified at this stage. In the second stage of selection of beneficiaries occurs, a listing operation is undertaken in the field in each of the clusters selected for sampling. The beneficiary will be collected by the project staffs from the market intermediaries and will be verified and geo location will be identified. After the listing is created, a random systematic sample of beneficiaries within the sampled clusters is selected for interviewing. To ensure a representative sample, we will consider a margin of error of 10 percent, a confidence level of 95 percent, and estimate a 90 percent response rate. In its survey design, NSAF will also take guidance from the [FTF Sampling Guide for Beneficiary-Based Surveys](https://agrilinks.org/library/sampling-guide-beneficiary-based-surveys-select-feed-future-agricultural-annual-monitoring)¹.

5.5 DATA QUALITY ASSURANCE

Under the leadership of ME&L Specialist, NSAF will implement a quality compliance system based on USAID requirements, which will include annual visits to each field office where project staff are

¹ <https://agrilinks.org/library/sampling-guide-beneficiary-based-surveys-select-feed-future-agricultural-annual-monitoring>

located to conduct a systematic data quality check. NSAF will run an initial internal Data Quality Assessment (DQA) by March 2017, with subsequent DQAs planned on an annual basis. The DQA findings will be shared largely with field office staff with recommendations for corrective measures to overcome the identified gaps/problems/issues. NSAF project will take on USAID's prescriptive guideline to conduct DQA and maintain high quality data throughout.

The purpose of a DQA is to ensure that USAID/Nepal's data quality requirements are met, as determined by providing five data quality standards: Validity, Precision, Reliability, Integrity and Timeliness. DQAs are used to help inform decision-makers on the extent to which the data integrity can be trusted to influence project management decisions.

USAID DQAs will focus on applying the data quality standards and examining the systems and approaches for collecting data to determine whether they are likely to produce high quality data over time. In other words, if the data quality standards are met and the data collection methodology is well designed, then it is likely that good quality data will result. The DQAs will provide processes, protocols, and templates addressing how to:

- Assess the design and implementation of the program's data management and reporting systems
- Trace and verify (recount) data collection processes and systems of indicator results
- Address the DQA findings and implement recommendations.

In addition to routine DQAs, NSAF shall also do the following to ensure data quality and reliability:

1. Rigorous training of staff and clear survey design so that indicator values are correctly collected and reported per FTF indicator definition. (Project Coordinator and ME&L Specialist)
2. Careful survey implementation to ensure sampling frames are representative (Socio-economics Lead)
3. Triangulated information from multiple sources (e.g. farmer surveys of tech adoption, market surveys of fertilizer sales) to address biases intrinsic to any one survey estimation method (Socio-economics Lead)
4. Standardized templates/ variables names/ data collection methods and protocols for on-farm agronomic evaluations (Fertilizer Lead)
5. Emphasis on digital data collection to reduce data encoding errors and data entry lags. The ME&L Specialist will monitor the process for identifying potential anomalies or inaccuracies during data entry.
6. The ME&L Specialist will verify 5-10 percent of submitted data every month. Upon encountering any inaccuracies, necessary corrective actions will be taken.
7. Robust data archiving in searchable portals (with clear meta-data) to ensure recovery and secure storage.
8. Periodic (quarterly) internal audits and mentoring to guarantee that individual project staff understand data norms and that process flows are honored.
9. The project will minimize potential double counting through close coordination between seed and fertilizer technical teams. The ME&L Specialist reviews indicators with each team

and identify areas where overlapping may occur. Once identified, the teams work together to determine how the data will be monitored and reported. The data management system established in the project will also help to identify if double counting occurs.

5.6 DATA ANALYSIS AND REPORTING

The NSAF Project will provide USAID/Nepal with quarterly, annual and final reports as stipulated in the agreement. Thus each fiscal year (Oct-Sept) 3 quarterly reports and one annual report will be generated and submitted to USAID/Nepal. These reports contain detailed project progress of two components, cross-cutting issues and performance reports. The performance report section contains the results for the Standard Indicators. Basic descriptive statistics will be presented during reporting to USAID/Nepal with enough geo-spatial data evidence for all (where relevant) indicators.

The PMC and PAC will also analyze reports, particularly in regards to deviations from established targets, and determine when and how any corrective measures may need to be taken.

Soils analysis: Introduction of spectral-based methods that permit rapid, low-cost, and repeatable measures of soil properties. These methods will be used by the Soil Management Directorate (SMD) to efficiently characterize soils for district-level mapping purposes as well as for more complete benchmark site descriptions by the Nepal Agricultural Research Council (NARC) that will be used in simulation framework like APSIM to extend and contextualize field trial results. All data will be geo-tagged and integrated into the geo-spatial framework for soils information; work will continue over the life-span of the project. *Core project responsibilities:* fertilizer lead with SMD and NARC partners

Soil geo-spatial information: ArcGIS-based spatial data management, including new prediction algorithms for generating soils information where the sampling grid is sparse in order to develop Nepal's first digital soils map. Methods for the latter will be developed for the Nepal context in consultation with [African Soil Information Service](http://africasoils.net) (AfSIS)² and the [International Soil Reference and Information Centre](http://www.isric.org) (ISRIC)³. Work will continue over the life of the project. *Core project responsibilities:* GIS specialist with SMD and NARC partners

Fertilizer field trials and evaluations: Standardized Excel-based 'field books' are deployed with clear meta-data standards (including geo-coding) to collect agronomic trial data in consistent formats. Data analysis will be conducted in the 'R' statistical computing environment, with datasets archived on CIMMYT's instance of [Dataverse](http://data.cimmyt.org/dvn/)⁴ as well as USAID's DDL. *Core project responsibilities:* fertilizer lead with NARC, IFDC, IPNI, and IRRI partners.

M&E and Socio-economic surveys: NSAF will use largely quantitative analysis to assess outputs and outcomes, supplemented by qualitative analysis as needed to understand factors driving project performance and to document lessons learned. Survey data will be stored in proposed CIMMYT

² <http://africasoils.net>

³ <http://www.isric.org>

⁴ <http://data.cimmyt.org/dvn/>

database, which has some customized features to help monitoring the progress made by partner organizations against the set targets and to generate reports in tabular and graphical forms. Formulas are drawn from FTF guidance documents. Data will be stored in an easily accessible and systematic manner so that CIMMYT can use the data to generate maps using Google Earth, ArcView, ArcGIS, PowerMap, QGIS, etc.

AIDtracker Plus: USAID/Nepal is in the process of rolling out AIDtracker Plus (AT+) to implementing partners. This cloud-based system will require IPs to report baseline, targets and actuals to all indicators that are reported to USAID. Indicators and other relevant data will also be entered and managed into the AT+ Partner Portal via an Internet website. USAID will provide User IDs, passwords, and training for relevant staff.

Feed the Future Monitoring System: The ME&L Specialist will enter the fiscal year (FY) targets and performance results data of standard indicators into the on-line Feed the Future Monitoring Systems (FTFMS) in October/November each year, as per the calendar established by USAID/Washington's Bureau for Food Security (BFS).

TraiNet: The ME&L Specialist will ensure that training-related data collected through USAID's TraiNet portal is uploaded on at least a quarterly basis.

5.7 CAPACITY BUILDING

CIMMYT will conduct internal trainings for the staff of the Nepal Seed and Fertilizer project on how to use Open Data Kit (ODK) for conducting brief surveys in the field. ODK is an Android-based application that can be accessed through mobile phones, and which adeptly serves as a digital data-collection platform for relatively short surveys that don't require more sophisticated software (like Surveybe). Data collected through ODK can be geo-tagged and easily translated into mapping applications. CIMMYT will also mainstream new remote-sensed based methods for establishing unbiased sampling frames for surveys. These methods will be invaluable for increasing representativeness of M&E surveys while also rationalizing costs by ensuring that 'over-sampling' is avoided. CIMMYT will also introduce inference techniques that can give National Agricultural Research System (NARS) partners indications of adoption and market development without the burden of directly counting farmer adopters.

5.8 LEARNING AND ADAPTING

Table 3 outlines a learning plan to ensure that all stakeholders benefit from lessons from the implementation of the NSAF project. The learning plan involves regular theory of change validation and review, as well as review of the work plan and performance monitoring plan, and an after-action review for sharing lessons, best practices and success stories.

Table 3: Learning plan activities

Learning Activity	Product	Timing	Responsibility
Regular exchange of information and data with all parties involved, including USAID and other stakeholders	General correspondence with USAID Progress reports Evaluation/midterm review/impact study reports Scientific articles related to the project Raw data upon request to the project leader	Ongoing	CIMMYT
Revision of project planning (i.e., project plan, performance monitoring plan, theory of change and impact pathway) and decision-making	Revised work plan/implementation plan Revised performance monitoring plan	After the 6 month diagnostic phase (phase which will guide a much more detailed and focused work plan for implementing the project)	CIMMYT In consultation with USAID
	Revised theory of change and/impact pathway	Annually	
Make data publically available after the publication of results in line with CIMMYT public data policy	Raw data uploaded to a CIMMYT or external data repository	18 months after final data collection (estimated)	CIMMYT's Knowledge Management Unit

Learning Activity	Product	Timing	Responsibility
Review of reports from evaluations and other relevant studies <ul style="list-style-type: none"> • Review of report recommendations • Identification of actions to respond to the recommendation • Follow-up on the implementation of these actions 	Action plan in response to reports from evaluations and other relevant studies	2018 – Midterm evaluation of the project 2021 – Summative evaluation of the project	CIMMYT and USAID
After Action Learning Review to discuss what was supposed to happen, what actually happened, why there was a difference and what can be learned from this	A meeting including all stakeholders	End of project (2021)	CIMMYT

Learning questions:

Core learning questions for the seed component include:

1. How has the tripartite public-private partnership (PPP) model facilitated access to a large number of improved germplasm for local testing & deployment?
2. Did market segmentation and selection of varieties on product folio basis contribute to an increased adoption of varieties?
3. How much faster did registration, release and adoption of varieties become thanks to the product testing procedure developed?
4. How did the involvement of end-users in product portfolio designing and varietal selection support the improved accessibility of markets for both agri-outputs and inputs? How can end-users be involved in future activities? How can their participation be encouraged?
5. What was the effect of the seed information system on the business planning process of Seed partners? How was the supply of source seed of popular varieties affected?
6. Were varietal replacement ratio and seed replacement rate impacted by the project? What was the impact and how much of this contribution can be attributed to NSAF?
7. What were the effects of business mentoring on business plan execution by MSMEs?

8. How did the capacity building programs executed by the project affect the skilled workforce in the seed industry?.
9. What kinds of interactions did the Seed Entrepreneurs' Association of Nepal (SEAN) have with policy makers, and what types of benefits accrued?
10. Did the identification of seed production zones enhance the productivity of seed crop? How did this affect seed prices opportunities for the custom seed production business in Nepal?
11. How was access to processing and seed quality services improved for seed partners?

Core learning questions for the fertilizer component include:

1. Which types of farmers are poised to invest in soil fertility enhancement?
2. How best can fertilizer recommendations be matched to farmer capacity to make these investments?
3. How does willingness to pay for fertilizer change with perceptions of quality and sound information on likely returns on investment?
4. What gains in fertilizer use efficiency are achievable as recommendations are made at the district, VDC, and field-specific scales?
5. How quickly will the market respond to policy innovations that ostensibly 'draw in' investment are where are the gaps?

5.9 PLAN FOR SPECIAL REVIEWS, EVALUATIONS AND STUDIES

I. ANALYZING PRODUCERS' WILLINGNESS TO PAY FOR HIGH QUALITY INPUT (UNDER OBJECTIVES 2.4.1.1 AND 2.4.1.3)

The project is aiming towards improving farm productivity through the introduction of high-quality inputs (seed and fertilizer) with recommended agronomic practices. However, little information is available about farmer acceptability and willingness to pay for these inputs. Using Contingent Valuation (CV) technique, this study will analyze the willingness to pay of the farmers for seed and fertilizer. Farmers' willingness to pay (WTP) for fertilizers and seed, and related application tools will be assessed, considering their agronomic background knowledge ('agronomic literacy'), the price of the respective input with all its underlying determinants (e.g. transportation costs in the case of fertilizer), the input quality, and also socio-economic household conditions. Contingent Valuation (CV) will be used to quantify the amount that farmers would be willing to (and able to) pay for fertilizer and seed related technologies supported by the project. WTP data will be collected from households based on CV scenarios that describe the inputs that will be provided to the farmers by the stakeholders that are supported by the project, esp. private sector seed companies and fertilizer/input providers.

Output from willingness to pay and cognitive mapping studies will form the primary basis for deriving an understanding of farmer 'types' that predict behavior responses to new information and new soil management technologies. Understanding of the farmers' behavior will guide where the project expends much of its initial effort for fertilizer and seed market development and will be used to develop management recommendations that are responsive to the diverse capacity and willingness of farmers to invest improved quality seed and in soil fertility enhancement.

Tools: Questionnaire, focus group; When: 2017

II. RECURRENT FERTILIZER USE AND SALES SURVEYS PROVIDE ROBUST ANALYTICS ON SPATIAL AND TEMPORAL PROGRESSION OF MARKET DEVELOPMENT (UNDER OBJECTIVE 2.4.1.3)

The project will conduct recurrent surveys (at least once per year) with a sample of farmers, agricultural input retailers, and agricultural input dealers to inform the beneficiaries about the update market information of improved hybrid seed and ISFM-related activities. This study combines both quantitative and qualitative approaches to evaluate the effectiveness of the private sector led approach for the development of the agriculture input market (seed and fertilizer) in Nepal. For farmers, these surveys will assess seed, fertilizer and ISFM use and predictors thereof (e.g. market availability and knowledge of improved practices). For retailers and their dealers, surveys will assess product offerings, marketing practices, customer base, sales volume, and constraints to growth. Together, these surveys will generate robust analytics on the spatial and temporal progression of market development and impacts associated with seed, fertilizer and ISFM use. Data collection will be conducted jointly with DOA with survey design inputs from NARC Social Sciences Division; digital survey methods will ensure timely data processing to inform the market information systems.

Tools: Questionnaire, focus group; When: 2016-2020

III. ADOPTION AND IMPACT OF IMPROVED SEED AND FERTILIZER MANAGEMENT ON FARMING SYSTEMS IN NEPAL (OBJECTIVES 2.4.1.1 AND 2.4.1.3)

Logically, investors in agricultural development projects would like to know the potential of their investments to achieve impact. This study will assess the adoption and impact of the introduction of high quality inputs (seed and fertilizer) to improve productivity and the possibility of sustainable production. This study will generate a panel data set of a group of farmers of their farming system from different agrological zone over the project period. In addition to the quantitative information the study will also employ qualitative data collection methods for an understanding of the structural and functional relationships of current farming systems in specific geographical areas and an identification of the endogenous and exogenous constraints to achieving farmers' goals. Efforts towards understanding why some producers adopt high quality inputs and advance agronomic systems, while many others do not, will help in the formulation of public policies and private strategies for the sector. NSAF will actively liaise with IFPRI in case of any synergistic opportunities with related studies.

Tools: Questionnaire, focus group; When: 2016-2020

IV. EXTERNAL REVIEWS

While monitoring will provide USAID and CIMMYT with early indications of the NSAF Project's progress, evaluations will provide deeper insight to help stakeholders achieve the intended results. USAID or its designee will conduct the midterm (end of 3rd year) and final (end of 5th year) evaluations, which will focused on key implementation issues and performance in terms of key indicators at the output and outcome level. These evaluations may include a detailed review and analysis of the development hypothesis, cause-and-effect dynamics, project organization,

management, field work, significant outputs, and the quality and quantity of overall performance. CIMMYT will ensure sufficient planning for the regular collection of data that may be required for different types of evaluations, most likely performance evaluations. CIMMYT and USAID will regularly communicate to ensure such preparation, and CIMMYT will collaborate with USAID as required in the planning the midterm and final evaluations.

6. ANNEXES

6.1 ANNEX 1: PERFORMANCE INDICATORS TRACKING TABLE (PITT)

[See attached EXCEL file]

6.2 ANNEX 2: PERFORMANCE INDICATOR REFERENCE SHEETS

Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-17 (formerly 4.5.2[5]): Number of farmers and others who have applied improved technologies or management practices with USG assistance
<p>NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.</p> <p>Project specific IR 2.1: Agriculture-Based Income Increased/Sub-IR 2.1.1: Agricultural Productivity Increased</p> <p>SPS LOCATION: Program Element 3.2: Agricultural Sector Capacity</p> <p>INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity</p> <p>INDICATOR TITLE: EG.3.2-17 Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance</p> <p>INDICATOR TYPE: IM- RAA/WOG; Outcome</p> <p>Performance Plan and Report (PPR) Indicator: No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:</p> <p>PERFORMANCE INDICATOR DEFINITION:</p> <p>This indicator measures the total number of direct beneficiary farmers and other primary sector producers of food crops, as well as individual processors (not firms), rural entrepreneurs, traders, natural resource managers, etc. that applied improved technologies anywhere within the food and fiber system as a result of USG assistance during the reporting year. This includes innovations in efficiency, value-addition, post-harvest management, marketing, sustainable land management, forest and water management, managerial practices, and input supply delivery. Technologies and practices to be counted here are agriculture-related, including those that address climate change adaptation and mitigation (including, but not limited to, carbon sequestration, clean energy, and energy efficiency as related to agriculture). Significant improvements to existing technologies and practices should also be counted.</p> <p>Improved technologies or management practices promoted under this project will fall within the following “Technology type” disaggregates:</p> <p style="padding-left: 40px;">Crop Genetics: e.g. improved/certified seed that could be higher-yielding, higher in nutritional content (e.g. through bio-fortification, such as vitamin A-rich sweet potatoes or rice, or high-protein</p>

maize, or drought tolerant maize, or stress tolerant rice) and/or more resilient to climate impacts; improved germplasm.

Soil-related Fertility and Conservation: e.g. Integrated Soil Fertility Management; soil management practices that increase biotic activity and soil organic matter levels, such as soil amendments that increase fertilizer-use efficiency (e.g. soil organic matter, mulching); improved fertilizer; improved fertilizer use practices; erosion control.

Climate Mitigation: technologies selected because they minimize emission intensities relative to other alternatives. Examples include low- or no-till practices, efficient nitrogen fertilizer use.

Climate Adaptation: technologies promoted with the explicit objective of adapting to current climate change concerns. Examples include drought and flood resistant varieties, conservation agriculture.

Marketing and Distribution: e.g. contract farming technologies and practices; improved input purchase technologies and practices; improved commodity sale technologies and practices; improved market information system technologies and practices.

Note there is some overlap between the disaggregates listed here and those listed under EG.3.2-18 Number of hectares under improved technologies or management practices as a result of USG assistance. This overlap is limited to technologies and practices that relate to activities focused on land. The list of disaggregates here is much broader because with this indicator we aim at tracking efforts focused on individuals (as opposed to land area) across the value chain in both land and non-land based activities.

If an activity is promoting a technology for multiple- benefits, the beneficiary applying the technology may be reported under each relevant Technology Type category. For example, mulching could be reported under Cultural practices (weed control), Soil-related fertility and conservation (organic content) and Water management (moisture control), depending on how (for what purpose(s)/benefit(s)) the activity is promoted to the beneficiary farmers.

If more than one beneficiary in a household is applying improved technologies, count each beneficiary in the household who does so.

If a lead farmer cultivates a plot used for training, e.g a demonstration plot used for Farmer Field Days or Farmer Field School, the beneficiary farmer should be counted under this indicator. However, if the demonstration or training plot is cultivated by extensionists or researchers, e.g. a demonstration plot in a research institute, neither the area nor the extensionist/researcher should be counted under the respective indicators.

If a beneficiary applied more than one improved technology during the reporting year, count the beneficiary under each technology type (i.e. double-count). However, count the beneficiary only once in the Total w/one or more improved technology category under the Technology Type disaggregate and

in the Sex disaggregate. In other words, a beneficiary should be counted once in the totals, regardless of the number of technologies applied during the reporting year.

Since it is very common for Feed the Future activities to promote more than one improved technology, not all of which are applied by all beneficiaries at once, this approach allows Feed the Future to accurately track and count the uptake of different technology types, and to accurately count the total number of farmers applying improved technologies. See EG.3.2-18 for an example of how to double-count hectares and farmers.

If a beneficiary cultivates a plot of land more than once during the reporting year, count the beneficiary once under each type of technology that was applied during any of the production cycles, but not more than once even if a technology is applied in multiple production cycles during the reporting year. For example, because of new access to irrigation as a result of a Feed the Future activity, a farmer can now cultivate a second crop during the dry season in addition to her/his regular crop during the rainy season. Whether the farmer applies Feed the Future promoted improved seed to her/his plot during one season and not the other, or in both the rainy and dry season, s/he would only be counted once in the Crop Genetics category under the Technology Type disaggregate. Note however that the area planted with improved seed should be counted each time it is cultivated under the indicator EG.3-6 Gross margin per hectare and indicator EG.3.2-18 Number of hectares of land under improved technologies.

Beneficiaries who are part of a group that apply improved technologies on a demonstration or other common plot, are not counted as having individually applied an improved technology. Instead, the group should be counted as one (1) beneficiary group and reported under indicator EG.3.2-20 Number of for-profit private enterprises, producers organizations... and community-based organizations (CBOs) that applied improved organization-level technologies or management practices. The area of the communal plot should be counted under indicator EG.3-6 Gross margin per hectare and indicator EG.3.2-18 Number of hectares of land under improved technologies.

If a lead farmer cultivates a plot used for training, e.g., a demonstration plot used for Farmer Field Days or Farmer Field School, the lead farmer should be counted as a beneficiary for this indicator. In addition, the area of the demonstration plot should be counted under indicator EG.3-6 Gross margin per hectare, if applicable, and indicator EG.3.2-18 Number of hectares of land under improved technologies. However, if the demonstration or training plot is cultivated by extension agents or researchers (a demonstration plot in a research institute, for instance), neither the area nor the extension agent or researcher should be counted under this indicator, EG.3-6, or EG.3.2-18.

This indicator counts individuals who applied improved technologies, whereas indicator EG.3.2-20 Number of for-profit private enterprises, producers organizations... and community-based organizations (CBOs) that applied improved organization-level technologies or management practices counts firms, associations, or other group entities that applied improved technologies or practices. However, in most cases, this indicator should not count as individuals members of an organization that applied a technology or practice. For example, if a producer association implements a new computer-based accounting system during the reporting year, the association would be counted under indicator EG.3.2-20 Number of for-profit private enterprises, producers organizations...applying, but the

members of the producer association would not be counted as having individually-applied an improved technology/practice under this indicator. However, there are some cases where both the group entity should be counted under indicator EG.3.2-20 and its members counted under this indicator. For example, a producer association purchases a dryer and then provides drying services for a fee to its members. In this scenario, the producer association can be counted under EG.3.2-20 and any association member that uses the dryer service can be counted as applying an improved technology/practice under this indicator.

If a direct beneficiary sample survey is used to collect data for this indicator, the sample weighted estimate of the total number of beneficiaries for each Technology Type and Sex disaggregate must be calculated using appropriate sample weights before being entered into FTFMS to ensure accurate calculation of weighted averages across all implementing mechanisms at the Operating Unit level as well as across all Feed the Future countries for global reporting.

Please refer to the Feed the Future Agricultural Indicators Guide (<http://agrilinks.org/library/feed-the-future-ag-indicators-guide>) for additional guidance on collecting and interpreting the data required for this indicator.

RATIONALE:

Technological change and its adoption by different actors in the agricultural value chain will be critical to increasing agricultural productivity. In the Feed the Future (FTF) results framework, this indicator falls under Intermediate Result (IR) 1: Improved Agricultural Productivity and Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity.

UNIT: Number

DISAGGREGATE BY:

Value chain: Seed, Fertilizer

Value chain actor type: Farmers, Others (e.g. individual processors (but not firms), rural entrepreneurs, traders, extension agents).

Technology type: (see explanation in Definition, above)

Sex: Male, Female

Caste/ethnicity: Disadvantaged Social Groups (DSG), non-DSG

DSGs include Dalit, Janajati and Muslim [ref. [USAID/Nepal 2014-2019 Performance Management Plan](#)]

Commodity (Activities promoting sustainable intensification and similar crop diversification strategies where double-counting beneficiaries is complicated and not meaningful are not required to disaggregate beneficiaries by commodity, and should use the "Disaggregates not available" category under the Commodities disaggregate.)

DATA SOURCE: Sample survey of direct beneficiaries, activity or association records, farm records

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiaries

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Sample survey of direct beneficiaries, activity or association records, farm records

FREQUENCY OF COLLECTION: Semi-annual

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project Coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Year 1 of Annual recurrent survey serves as project baseline

Rationale for Targets (*optional*): The people applying new technologies exceeds those directly trained by the project because the project mostly focuses on training key intermediaries (e.g. agro-dealers, extension personnel, cooperative leadership, etc.) rather than the farmer beneficiaries. This 'one reaches many' approach is a core element of our scaling strategy.

Other Notes (*optional*):

GEOGRAPHIC DIMENSION ; VDC level

Data Reporting Units: Geo level data collection is at VDC level

Baseline Units (*optional*): N/A

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August 2016

In which Fiscal Year to be reported this indicators' result?: Year 3 (Oct 2017-Sept 2018)

When will be the baseline data available?; 1 Jan 2017

Are you setting targets for this indicator once the baseline data is available? Yes

What changes to indicators is anticipated: Technology adoption by each crop/ management practice.

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3-6 (Formerly 4.5-16):
Farmer's gross margin per hectare obtained with USG assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.1: Agriculture-Based Income Increased/Sub-IR 2.1.1: Agricultural Productivity Increased

SPS LOCATION: Program Area EG.3: Agriculture

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity

INDICATOR TITLE: EG.3-6 Farmer's gross margin per hectare obtained with USG assistance

INDICATOR TYPE: IM- RAA; Outcome

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

The gross margin is the difference between the total value of smallholder production of an agricultural commodity and the cost of producing that commodity, divided by the total number of units in production (hectares of crops). Gross margin per hectare is a measure of net income from that farm activity.

Gross margin is calculated automatically by FTFMS from the following data points, reported as totals across all direct beneficiaries, and disaggregated by commodity and by sex:

1. Total Production (kg, mt, number, or other unit of measure) by direct beneficiaries during the reporting period (TP);
2. Total Value of Sales (USD) by direct beneficiaries during the reporting period (VS);
3. Total Quantity of Sales (kg, mt, number, or other unit of measure) by direct beneficiaries during the reporting period (QS);
4. Total Recurrent Cash Input Costs (USD) of direct beneficiaries during the reporting period (IC);
6. Total Units of Production: Area planted in ha (for crops); Area in ha (for aquaculture ponds); Number of animals in herd for live animal or meat sales; Number of animal in production for dairy or eggs; Number of cages for open water aquaculture for direct beneficiaries during the production period (UP).

Gross margin per ha, per animal, per cage = $[(TP \times VS/QS) - IC] / UP$.

The unit of measure for Total Production (kg, mt, liter, number) must be the same as the unit of measure for Total Quantity of Sales, so that the average unit value calculated by dividing sales value by sales quantity can be used to value total production $(TP \times VS/QS)$. If sales quantity are recorded in a

different unit of measure from what is used for production, they must be converted into the equivalent in the units of measure used for total production prior to entry in FTFMS. For example, if Total Production was measured in metric tons, and Total Quantity of Sales was measured in kg, Total Quantity of Sales should be divided by 1,000 before being entered in FTFMS.

If the form of the commodity varies between how it was harvested or produced and how it was sold, e.g. shelled peanuts are harvested but unshelled peanuts are sold, fresh milk was produced but cheese is sold or fresh fish are harvested but dried fish are sold, the sales form must be converted to its equivalent in the harvested/produced form prior to entry in FTFMS. For example, in Malawi, the extraction rate for shelled from unshelled peanuts is 65%. So if 1,500 kg of shelled peanuts were sold, this is equivalent to 2,304 kg of unshelled peanuts, and 2,304 should be entered as sales quantity, not 1,500, assuming that total production was measured in kg of unshelled peanuts. Country-specific extraction rates for a range of value-added commodities may be found at <http://www.fao.org/fileadmin/templates/ess/documents/methodology/tcf.pdf>.

Total Recurrent Cash Input Costs include significant cash costs that can be easily ascertained. As a rule of thumb, cash costs that represent at least 5% of total cash costs should be included. (Note, it is not necessary to calculate the actual percent contribution of each input to total input costs to determine which inputs account for at least 5% of total costs. Partners should be able to guess-estimate which inputs qualify.) The most common cash input cost items are: purchased water, fuel, electricity, seeds, fertilizer, pesticides, hired labor, hired enforcement, and hired equipment services. Capital investments and depreciation should not be included in cash costs. Unpaid family labor, seeds from a previous harvest and other in-kind inputs should not be included in Total Recurrent Cash Input Costs.

Partners should enter disaggregated values of the five gross margin data points, disaggregated first by commodity, then by the sex disaggregate category: male, female, joint and association-applied, as applicable. Commodity-sex layered disaggregated data are required because the most meaningful interpretation and use of gross margin information is at the specific commodity level, including the comparison of gross margins obtained by female and male farmers. FTFMS will then use the formula above to automatically calculate the average commodity-specific gross margin, and the average commodity-specific gross margin for each sex disaggregate.

For example, for the total production data point, partners should enter total production during the reporting year on plots managed by female, maize-producing, direct beneficiaries; total production on plots managed by male, maize-producing, direct beneficiaries; total production during the reporting year on plots managed jointly by female and male, maize-producing, direct beneficiaries, if applicable; and total production on plots managed by groups ("association-applied"), maize-producing, direct beneficiaries, if applicable. And so forth for the other data points: total value of sales; total quantity of sales; total cash recurrent input costs; and total units of production - hectares in this case. The same procedure applies for each commodity. The FTFMS will automatically calculate weighted (by total hectares, animals, or cages) average gross margin, in USD per ha, animal, or cage for the overall commodity (e.g. gross margin/hectare for maize among all direct beneficiaries) and for each sex disaggregate category (e.g. gross margin/hectare for female maize-producing direct beneficiaries.)

In addition to the five data points, partners must enter the number of direct beneficiaries of the activity, disaggregated by commodity and then sex. A direct beneficiary should be counted only once under each commodity regardless of the number of production cycles for the commodity during the reporting year. If a plot of land falls under the disaggregate “jointly-managed”, the number of beneficiaries jointly managing the plot should be counted. In the case of the “association-applied” disaggregate however, neither the association nor the individuals involved in the association can be considered as a direct beneficiary and therefore nothing should be counted.

If a direct beneficiary sample survey is used to collect gross margin data points, the sample weighted estimate of the total across all beneficiaries must be calculated for each data point using appropriate sample weights before being entered into FTFMS to ensure accurate calculation of weighted average gross margin per commodity across all implementing mechanisms at the Operating Unit level as well as across all Feed the Future countries for global reporting.

If there is more than one production cycle in the reporting year, all data points should be summed across production cycles if the same commodity was produced, including farmer’s land area or number of cages, which should be counted (and summed) each time the land is cultivated or the cages are used.

If the production cycle from soil preparation/planting to sales starts in one fiscal year and ends in another, gross margin should be reported in the second fiscal year, once all data points are available. In these cases, since the four key agricultural indicators (gross margins, number of farmers applying improved technologies, number of hectares under improved technologies, and incremental sales) are all related, all four indicators should be reported in the second fiscal year.

Gross margin targets should be entered at the commodity level. Targets do not need to be set for each of the five data points or at the sex disaggregate level.

Note that the FTFMS will automatically generate the PPR gross margin indicator per unit of land, per animal or per cage by calculating, at the operating unit level, a weighted average gross margin per hectare (includes crops and pond-based aquaculture), per animal or per cage across all relevant commodities reported by Implementing Partners. This PPR indicator can be then entered into FactsInfo. Caution should be exercised when interpreting this PPR indicator, however, because this gross margin is not commodity-specific and may be calculated across substantially different commodities (e.g. average gross margin for maize and for basil). These average gross margins could be meaningless or misleading. Missions are encouraged to use the FTFMS commodity- and sex-specific data to analyze and report on gross margins.

Please refer to the Feed the Future Agricultural Indicators Guide (<https://agrilinks.org/library/feed-the-future-ag-indicators-guide>) for collecting and interpreting the data required for this indicator.

RATIONALE:

Improving the gross margin for farm commodities for small-holders contributes to increasing agricultural GDP, will increase income, and thus directly contribute to the IR of improving production

and the goal indicator of reducing poverty. In the Feed the Future (FTF) Results Framework, this indicator measures Intermediate Result 1: Improved Agricultural Productivity.

UNIT: dollars/hectare (crops)

FTFMS notes: Enter the five data points into FTFMS for baseline and actual reporting.

DISAGGREGATE BY:

Value chain: Seed, Fertilizer

Targeted commodity (type of crop). *Gross margin should be reported separately for horticultural products; the general “Horticulture” category should not be used. If a large number of horticultural crops are being produced and tracking gross margin for each is too difficult, gross margins may be reported for the five (5) most commonly produced horticultural products.*

Sex of farmer: Male, Female, Joint, Association-applied. *Note: before using the “Joint” sex disaggregate category, partners must determine that decision-making about what to plant on the plot of land and how to manage it for that particular beneficiary and targeted commodity is truly done in a joint manner by male(s) and female(s) within the household. Given what we know about gender dynamics in agriculture, “joint” should not be the default assumption about how decisions about the management of the plot are made.*

Caste/ethnicity of farmer: Disadvantaged Social Groups (DSG), non-DSG

DSG include Dalit, Janajati and Muslim [ref. [USAID/Nepal 2014-2019 Performance Management Plan](#)]

DATA SOURCE: Implementing partners should collect the data points for this indicator via direct beneficiary farmer sample surveys, as well as data collection through producer organizations or farm records, and/or routine activity records.

MEASUREMENT NOTES:

Additional data elements can be collected so Missions and partners can calculate productivity of other factors of production. For example, water consumption in cubic meters can be collected and used in the denominator to calculate water productivity, which is important in irrigated areas, and total labor used can be collected and used to calculate labor productivity in labor-scarce settings.

LEVEL OF COLLECTION: Activity-level, direct beneficiaries, targeted commodity

DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Direct beneficiary farmer sample surveys; data collection through producer organizations or farm records, routine activity records

FREQUENCY OF COLLECTION: Annually.

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Year 1 of Annual recurrent survey serves as project baseline

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION: VDC level

Data Reporting Units: Geo level data collection is at VDC level

Baseline Units (*optional*): If Geo level baseline unit is District

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 2 (Oct 2016-Sept 2017)

When will be the baseline data available?; 1 Jan 2017

Are you setting targets for this indicator once the baseline data is available? Yes

What changes to indicators is anticipated: Gross margin by each crop/ management practice.

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-18 (Formerly 4.5.2[2]):
Number of hectares of land under improved technologies or management practices with USG
assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.1: Agriculture-Based Income Increased/Sub-IR 2.1.1: Agricultural Productivity Increased

SPS LOCATION: Program Element 4.5.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation

INDICATOR TITLE: EG.3.2-18 Number of hectares under improved technologies or management practices with USG assistance

INDICATOR TYPE: WOG/RAA/Outcome

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator measures the area (in hectares) of land cultivated using USG-promoted improved technology(ies) or management practice(s) during the reporting year. Technologies to be counted are agriculture-related, land-based technologies and innovations, including those that address climate change adaptation and mitigation. The indicator does not count application of improved technologies in aquaculture ponds, even though area of ponds is measured in hectares under indicator EG.3-6 Gross Margin per hectare. Significant improvements to existing technologies should also be counted.

Examples of relevant disaggregated technology types include:

- Crop genetics: e.g. improved/certified seed that could be higher-yielding, higher in nutritional content (e.g. through biofortification, such as vitamin A-rich sweet potatoes or rice, or high-protein maize), and/or more resilient to climate impacts; improved germplasm.
- Soil-related fertility and conservation: e.g. Integrated Soil Fertility Management; soil management practices that increase biotic activity and soil organic matter levels, such as soil amendments to increase fertilizer-use efficiency (e.g. mulching); fertilizers; erosion control.
- Climate Mitigation: technologies selected because they minimize emission intensities relative to other alternatives. Examples include low- or no-till practices, efficient nitrogen fertilizer use.

- Climate Adaptation: technologies promoted with the explicit objective of adapting to current climate change concerns. Examples include drought and flood resistant varieties, conservation agriculture.

If an activity is promoting a technology for multiple benefits, the area under the technology may be reported under each relevant category under the Technology Type disaggregate. For example, mulching could be reported under Cultural practices (weed control), Soil-related fertility and conservation (organic content) and Water management (moisture control), depending on how of for what purpose(s) or benefit(s) the activity was promoted.

If a beneficiary cultivates a plot of land more than once in the reporting year, the area should be counted each time one or more improved technologies is applied. For example, because of access to irrigation as a result of a Feed the Future activity, a farmer can now cultivate a second crop during the dry season in addition to her/his regular crop during the rainy season. If the farmer applies Feed the Future promoted technologies to her/his plot during both the rainy season and the dry season, the area of the plot would be counted twice under this indicator. However, the farmer would only be counted once under EG.3.2-17 Number of farmers and others who have applied improved technologies.

If a group of beneficiaries cultivate a plot of land as a group, e.g. an association has a common plot on which multiple association members cultivate together, and on which improved technologies are applied, the area of the communal plot should be counted under this indicator and recorded under the sex disaggregate “association-applied”. In addition, the association should be counted once under indicator EG.3.2-20 Number of for-profit private enterprises, producer’s organizations... and community-based organizations (CBOs) that applied improved organization-level technologies or management practices.

If a lead farmer cultivates a plot used for training, e.g a demonstration plot used for Farmer Field Days or Farmer Field School, the area of the demonstration plot should be counted under this indicator. In addition, the lead farmer should be counted as one individual under indicator EG.3.2-17 Number of farmers and others who have applied improved technologies. However, if the demonstration or training plot is cultivated by extension agents or researchers, (a demonstration plot in a research institute, for instance) neither the area nor the extension agent or researcher should be counted under this indicator or indicator EG.3.2-17.

If more than one improved technology is being applied on a hectare, count the hectare under each technology type (i.e. double-count).

In addition, count the hectare under the Total w/one or more improved technology category. Since it is very common for Feed the Future activities to promote more than one improved technology, not all of which are applied by all beneficiaries at once, this approach allows Feed the Future to accurately track and count the uptake of different technology types, and to accurately count the total number of hectares under improved technologies.

If a direct beneficiary sample survey is used to collect data for this indicator, the sample weighted estimate of the total number of hectares across all beneficiaries for each Technology Type and Sex disaggregate must be calculated using appropriate sample weights before being entered into FTFMS to

ensure accurate calculation of weighted averages across all implementing mechanisms at the Operating Unit level as well as across all Feed the Future countries for global reporting.

Please refer to the Feed the Future Agricultural Indicators Guide (<https://agrilinks.org/library/feed-the-future-ag-indicators-guide>) for collecting and interpreting the data required for this indicator.

RATIONALE:

This indicator tracks successful application of technologies and management practices in an effort to improve agricultural productivity, agricultural water productivity, sustainability, and resilience to climate change. In the Feed the Future (FTF) results framework, this indicator reports contributions to IR 1: Improved Agricultural Productivity and Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation.

UNIT: Hectares

DISAGGREGATE BY:

Technology type: (see explanation in definition, above)

Sex: Male, Female, Joint, Association-applied

Note: before using the "Joint" sex disaggregate category, partners must determine that decision-making about what to plant on the plot of land and how to manage it for that particular beneficiary and targeted commodity is truly done in a joint manner by male(s) and female(s) within the household. Given what we know about gender dynamics in agriculture, "joint" should not be the default assumption about how decisions about the management of the plot are made.

Note: The sum of hectares under the Sex disaggregate should equal the total under the "Total w/one or more improved technology" Technology Type disaggregate.

Caste/ethnicity: Disadvantaged Social Groups (DSG), non-DSG

DSG include Dalit, Janajati and Muslim [ref. [USAID/Nepal 2014-2019 Performance Management Plan](#)]

FTFMS-only disaggregate: Commodity: Maize, rice, lentil, vegetable, other

Activities promoting sustainable intensification and similar crop diversification strategies where calculating area under specific commodities is complicated and not meaningful are not required to disaggregate beneficiaries by commodity, and should use the "Disaggregates not available" category under the Commodities disaggregate.

DIRECTION OF CHANGE: Higher is better

DATA SOURCE: Implementing Partners will collect this data through census or survey of direct beneficiaries, direct observations of land, farm records, and activity documents.

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiaries; only those hectares affected by USG assistance, and only those newly brought or continuing under improved technologies/management during the current reporting year

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Via survey or other applicable method

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Year 1 of Annual recurrent survey serves as project baseline

Rationale for Targets (*optional*): Utilization of improved technologies

Other Notes (*optional*):

GEOGRAPHIC DIMENSION ; VDC level

Data Reporting Units: Geo level data collection is at VDC level

Baseline Units (*optional*): n/a

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 2 (Oct 2016- Sept 2017)

When will be the baseline data available?; 1 Jan 2017

Are you setting targets for this indicator once the baseline data is available? Yes

What changes to indicators is anticipated: Area coverage by each crop/ management practice

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-20 (formerly 4.5.2[42]):
Number of for-profit private enterprises, producers organizations, water users associations, women's groups, trade and business associations and community-based organizations (CBOs) that applied improved organization-level technologies or management practices with USG assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.1: Agriculture-Based Income Increased/Sub-IR 2.1.2: Value Chains Strengthened

SPS LOCATION: Program Element EG.3.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation

INDICATOR TITLE: EG.3.2-20 Number of private enterprises, producers organizations, water users associations, women's groups, trade and business associations and community-based organizations (CBOs) that applied improved technologies or management practices as a result of USG assistance

INDICATOR TYPE: IM- RAA/WOG; Outcome

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

Total number of private enterprises (processors, input dealers, storage and transport companies) producer associations, cooperatives, water users associations, fishing associations, women's groups, trade and business associations and community-based organizations (CBOs), including those focused on natural resource management, that applied improved technologies or management practices at the organization level during the reporting year. Organization-level technologies and management practices include those in areas such as management (financial, planning, human resources), member services, procurement, technical innovations (processing, storage), quality control, marketing, etc. as a result of USG assistance in the current reporting year. Only count the entity once per reporting year, even if multiple technologies or management practices are applied.

Count the organization (enterprise, association, cooperative or CBO) applying an improved technology or management practice as one entity, and not as the number of employees or membership. For example, if a farmers' association incorporates improved maize storage as a part of member services, the application is counted as one association and not multiplied by the number of farmer-members.

However, if individual direct beneficiaries then use the association's maize storage service to improve the post-harvest handling of their production, they can be counted under EG.3.2-17 Number of farmers and others applying improved technologies.

RATIONALE:

This indicator tracks private sector and civil society behavior change to increase agricultural sector productivity and aligns with Intermediate Result (IR) 1 Improved Agricultural Productivity and Sub IR 1.1 Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity in the Feed the Future (FTF) results framework.

UNIT: Number

DISAGGREGATE BY:

Type of organization (see indicator title for principal types)

DATA SOURCE: Implementing partner observation, activity records, etc.

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiary organization

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Observation, activity records, etc.

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not required

Rationale for Targets (*optional*):

Other Notes (optional):

GEOGRAPHIC DIMENSION ; National

Data Reporting Units: N/A

Baseline Units (optional): At national level

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 1 (Apr 2016-Sept 2016)

When will be the baseline data available?; N/A

Are you setting targets for this indicator once the baseline data is available? No

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-7 (formerly 4.5.2[39]):
Number of technologies or management practices under research, under field testing, or made
available for transfer as a result of USG assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.1: Agriculture-Based Income Increased/Sub-IR 2.1.2: Value Chains Strengthened

SPS LOCATION: Program Element 4.5.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation

INDICATOR TITLE: EG.3.2-7 Number of technologies or management practices under research, under field testing, or made available for transfer as a result of USG assistance

INDICATOR TYPE: IM-RAA; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016;
If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator is for research activities and tracks the progression of new or significantly improved technologies through the research and development (R&D) process. It should not be used to track technologies being disseminated through "implementation" activities. Technologies to be counted are agriculture-related technologies and innovations including those that address climate change adaptation and mitigation (including carbon sequestration, clean energy, and energy efficiency as related to agriculture), and may relate to any of the products at any point on the supply chain.

Relevant technologies include:

- Mechanical and physical: New land preparation, harvesting, processing and product handling technologies, including packaging, sustainable water management practices; sustainable land management practices; sustainable fishing practices;
- Biological: New germ plasm (varieties, breeds, etc.) that could be higher-yielding or higher in nutritional content and/or more resilient to climate impacts; biofortified crops such as vitamin A-rich sweet potatoes or rice, or high-protein maize, or improved livestock breeds; soil management practices that increase biotic activity and soil organic matter levels; and livestock health services and products such as vaccines;
- Chemical: Fertilizers, insecticides, and pesticides sustainably and environmentally applied, and soil amendments that increase fertilizer-use efficiencies;

- Management and cultural practices: Information technology, improved/sustainable agricultural production and marketing practices, increased use of climate information for planning risk management strategies, climate change mitigation and energy efficiency, and natural resource management practices that increase productivity and/or resiliency to climate change. IPM, ISFM, and PHH as related to agriculture should all be included as improved technologies or management practices.

Please see Feed the Future Indicator Handbook Appendix 4 for guidance on counting technologies for USAID research projects on crop and animal breeding and selection.

Significant improvements to existing technologies should also be counted; an improvement would be significant if, among other reasons, it served a new purpose or allowed a new class of users to employ it. Examples include a new blend of fertilizer for a particular soil, tools modified to suit a particular management practice, and improved fishing gear.

A description of the three phases of research and development is below. It is not required that a technology pass through all three phases to be reported under the indicator. For example, a seed variety that is only being field-tested for country-level adaptation and then submitted for country-level certification would only be tracked through phases II and III.

- ...in Phase I: under research as a result of USG assistance: Count new technologies or management practices under research in the current reporting year. Any new technology or management practice that was under research in a previous year but not during the reporting year should not be included. Technologies under research are as follows:
 - a) For biotech crop research: When technologies are under research, the process is contained in a laboratory or greenhouse; once the possibility of success is judged high enough, a permit is required to move to field testing. The change of location from a contained laboratory or greenhouse to a confined field with the receipt of a permit indicate that the research has completed the “under research” stage.
 - b) For non-biotech crop research: When technologies are under research, plant breeders work on developing new lines on research plots under controlled conditions. All research should have a target, often expressed in terms of traits to be combined into a specific cultivar or breed. When the research achieves “proof of concept” (by accumulating technical information and test results that indicate that the target is achievable), the “under research” phase is completed. Note that for crops, much or all of this phase might be conducted outdoors and in soil; these attributes do not make this work “field testing.”
 - c) For non-crop research: “under research” signifies similarly research conducted under ideal conditions to develop or support the development of the product or process.
- ...in Phase II: under field testing as a result of USG assistance: “Under field testing” means that research has moved from focused development to broader testing under conditions intended

to resemble those that the potential users of the new technology will encounter. Testing might be done in the actual facilities or fields of potential users, or it might be in a facility set up to duplicate those conditions. More specifically:

- a) For biotech crop research: Once a permit has been obtained and the research moves to a confined field, the research is said to be “under field testing.”
 - b) For non-biotech crop or fisheries research: During “field testing” the development of the product or technology continues under end- user conditions in multi-location trails, which might be conducted at a research station or on farmers’/producer’s fields/waters or both. Note that for crops, all of this phase would be conducted outdoors and in soil, but this is not what makes this work “field testing.”
 - c) For non-crop research: “under field testing” signifies similarly research conducted under user conditions to further test the product, process, or practice. In the case of research to improve equipment, the endpoint of field testing could be sales of equipment (when the tester is a commercial entity). In other cases it could be distribution of designs (when the tester is a non-commercial entity) or the distribution of publications or other information (based on the results of field testing).
- ...in Phase III: made available for transfer as a result of USG assistance. This phase counts technologies that are now able to be transferred to an end user. It does not count the number of technologies actually transferred by public or private entities, including implementing partners. Completing a research activity does not in itself constitute having made a technology available for transfer. Conditions may need to be met before a technology can move into the public domain, and this Phase captures technologies that have met these conditions. For example, in the case of crop research that developed a new variety, the variety has to pass through any required approval and certification process, and seed of the new variety should be available for multiplication in order for the seed to be available to public or private entities which can then transfer to the end user.

Technologies made available for transfer should be only those made available in the current reporting year. Any technology made available for transfer in a previous year should not be included.

In some cases more than one operating unit may count the same technology. This would occur if the technology were developed, for instance, in collaboration with a U.S. university and passed through regional collaboration to other countries.

RATIONALE:

This indicator tracks the three phase in research and technology investments and progress made toward dissemination and closely aligns with Feed the Future (FTF) Intermediate Result (IR) 1:

Improved Agricultural Productivity and Sub IR 1.2: Enhanced Technology Development, Dissemination, Management and Innovation.

UNIT: Number

DISAGGREGATE BY:

Value chain: Seed, Fertilizer

Phase of development:

Under research as a result of USG assistance;

Under field testing as a result of USG assistance;

Made available for transfer as a result of USG assistance

DATA SOURCE: Implementing partners activity records, reports or survey

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level; only those technologies under development by the USG activity

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Activity records or survey

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not required

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION ; National

Data Reporting Units: N/a

Baseline Units (*optional*): Yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 1 (Apr 2016-Sept 2016)

When will be the baseline data available?; N/a

Are you setting targets for this indicator once the baseline data is available? No

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-5 (formerly 4.5.2[12]):
Number of public-private partnerships formed as a result of USG assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.2: Small Enterprise Opportunities Expanded/Sub-IR 2.2.1: Entrepreneurial Skills Strengthened

SPS LOCATION: Program Element EG.3.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future –IR 3: Increased investment in agriculture and nutrition related activities

INDICATOR TITLE: EG.3.2-5 Number of public-private partnerships formed as a result of USG assistance

INDICATOR TYPE: IM-RAA; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator counts the number of public-private partnerships (PPPs) in agriculture or nutrition formed during the reporting year due to a Feed the Future intervention (i.e. agricultural or nutrition activity, as described below). A public-private partnership is considered formed when there is a clear agreement, usually written, between two or more formal entities to work together to achieve a common objective. There must be either a cash or in-kind significant contribution to the effort by both the public and the private entity or entities.

The essential characteristics of a PPP are:

1. The objective of the partnership agreement between the public and private entity(ies) is to achieve a common good,
2. The private sector partner's contribution to the PPP goes beyond the private sector partner's immediate commercial interests,
3. The public contribution is leveraging private resources that the private entity would not otherwise be contributing.

To count as a PPP, the private entity must spend or contribute something that is additional, or above and beyond what it would normally spend/contribute as a usual cost of doing business. Do not count as a PPP an agreement that involves the private entity simply attending to its day-to-day business needs (e.g., a processor purchasing produce). Do not count as a private sector contribution to a PPP purchase

agreements between a firm and project's beneficiaries, investments made by a firm in its own operations, or loans made under a USAID loan guarantee.

A public entity can be the national or a sub-national government as well as a donor-funded implementing partner. USAID must be one of the public partners. USAID is almost always represented in the partnership by its implementing partner. For-profit enterprises and NGOs are considered private. It includes state enterprises that are non-profit. A state-owned enterprise which seeks to make a profit (even if unsuccessfully) is counted as a private entity.

An agricultural activity is any activity related to strengthening the supply of agricultural inputs, application of production methods, agricultural processing, marketing or transportation.

A nutritional activity includes any activity focused on improving the nutritional content of agricultural products as provided to consumers, developing improved nutritional products, increasing support for nutrition service delivery, etc.

PPPs can be long or short in duration (length is not a criteria for measurement). A mission or an activity may form more than one partnership with the same entity, but this is likely to be rare. Count both Global Development Alliance (GDA) partnerships and non-GDA partnerships.

Count only public-private partnerships formed during the current reporting year. Any partnership that was formed in a previous year should not be included. Do not count the number of transactions, only the number of partnerships formed during the reporting year. Partnerships that include multiple partners should only be counted once.

RATIONALE:

Feed the Future (FTF) pursues PPPs to leverage additional resources toward our public good goals. The assumption of this indicator is that if more partnerships are formed it is likely that there will be more investment in agriculture or nutrition-related activities. This will help achieve FTF results framework IR 3 which then contributes to the key objective of agriculture sector growth.

UNIT: Number

System note: In the FTFMS, you will enter the name of the partnership, label it for its type, and the system will aggregate the total number for this indicator.

DISAGGREGATE BY:

Partnership focus (refer to the *primary focus* of the partnership): Agricultural production; Agricultural post-harvest transformation; Nutrition; Other (do not use this for multi-focus partnerships); Multi-focus (use this if there are several components of the above sectors in the partnership)

DATA SOURCE: Implementing partner records

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity level; attributable to USG investment

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Observation and records of partnerships created

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not required

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION ; National

Data Reporting Units: N/a

Baseline Units (*optional*): Yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August 2016

In which Fiscal Year to be reported this indicators' result? Year 1 (Apr 2016- Sept 2017)

When will be the baseline data available?;N/a

Are you setting targets for this indicator once the baseline data is available? No

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-2 (formerly 4.5.2[6]):
Number of individuals who have received USG-supported degree-granting agricultural sector
productivity or food security training**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.2: Small Enterprise Opportunities Expanded/Sub-IR 2.2.1: Entrepreneurial Skills Strengthened

SPS LOCATION: Program Element EG.3.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture

INDICATOR TITLE: EG.3.2-2 Number of individuals who have received USG-supported degree-granting agricultural sector productivity or food security training

INDICATOR TYPE: RAA; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator measures the number of people who are currently enrolled in or graduated during the reporting year from a degree-granting technical, vocational, associate, bachelor, master, or Ph.D. program. Degree candidates being supported through partial fellowship or exchange programs can be counted toward this indicator.

A person who completed one degree-granting program in the fiscal year and is currently participating in another degree-granting program should be counted only once.

Agricultural productivity includes cultured and natural production (farmers, fishers, ranchers). Include training on climate risk analysis, adaptation, and vulnerability assessments, as it relates to agriculture, but do not include nutrition-related trainings, which should be reported under HL.9-4 instead.

This indicator measures individuals receiving training, for which the outcome (individuals applying new practices), should be reported under EG.3.2-17.

RATIONALE:

Measures enhanced human capacity for policy formulation and implementation which is key to transformational development. In the Feed the Future (FTF) results framework, this indicator falls under Intermediate Result (IR) 1: Improved Agricultural Productivity and Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity.

UNIT: Number

DISAGGREGATE BY:

Sex: Male, Female

Caste/ethnicity: Disadvantaged Social Groups (DSG), non-DSG

DSG include Dalit, Janajati and Muslim [ref. [USAID/Nepal 2014-2019 Performance Management Plan](#)]

Duration:

New = the individual received USG-supported long-term training for the first time during the reporting year

Continuing = the individual received USG-supported long-term training in the previous year and continued to receive it in the reporting year

DATA SOURCE: Implementing Partners will review program documents to track individuals in long-term training programs.

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiaries

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Program training records

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not Required

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION: NARC

Data Reporting Units: N/a

Baseline Units (*optional*): Yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 2 (Oct 2016- Sept 2017)

When will be the baseline data available?; N/A

Are you setting targets for this indicator once the baseline data is available? NO

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-1 (formerly 4.5.2[7]):
Number of individuals who have received USG supported short-term agricultural sector
productivity or food security training**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.2: Small Enterprise Opportunities Expanded/Sub-IR 2.2.1: Entrepreneurial Skills Strengthened

SPS LOCATION: Program Element 4.5.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture

INDICATOR TITLE: EG.3.2-1 Number of individuals who have received USG supported short-term agricultural sector productivity or food security training

INDICATOR TYPE: IM- RAA/WOG; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator counts the number of individuals to whom significant knowledge or skills have been imparted through interactions that are intentional, structured, and purposed for imparting knowledge or skills. The indicator includes farmers, ranchers, fishers, and other primary sector producers who receive training in a variety of best practices in productivity, post-harvest management, linking to markets, etc. It also includes rural entrepreneurs, processors, managers and traders receiving training in application of improved technologies, business management, linking to markets, etc. Finally, it includes training to extension specialists, researchers, policymakers and others who are engaged in the food, feed and fiber system and natural resources and water management.

There is no pre-defined minimum or maximum length of time for the training; what is key is that the training reflects a planned, structured curriculum designed to strengthen capacities, and there is a reasonable expectation that the training recipient will acquire new knowledge or skills that s/he could translate into action. However, Operating Units may choose to align their definition of short-term training with the TrainNet training definition of 2 consecutive class days or more in duration, or 16 hours or more scheduled intermittently.

Count an individual only once, regardless of the number of trainings received during the reporting year and even if the trainings covered different topics. Do not count sensitization meetings or one-off informational trainings.

In-country and off-shore training are included. Training should include food security, water resources management/IWRM, sustainable agriculture, and climate change risk analysis, adaptation, mitigation, and vulnerability assessments as they relate to agriculture resilience, but should not include nutrition-related trainings, which should be reported under indicator HL.9-4 instead.

Delivery mechanisms can include a variety of extension methods as well as technical assistance activities. An example is a USDA Cochran Fellow.

This indicator counts individuals receiving training, for which the outcome, i.e. individuals applying improved practices, might be reported under EG3.1-17.

In FTFMS, partners should enter the number of individuals trained disaggregated first by Type of Individual then by Sex. For example, partners should enter for the total number of Male producers trained and the total number of Female Producers trained. FTFMS will automatically calculate the total number of Producers trained. Partners should then enter the total number of Males in Private Sector Firms trained and the total number of Females in Private Sector Firms trained. FTFMS will automatically calculate the total number of People in Private Sector Firms trained. And so on for the other Type of Individual disaggregate categories. FTFMS will then automatically calculate the total number of individuals who received short-term training by summing across the Type of Individual disaggregate.

RATIONALE:

Measures enhanced human capacity for improving agriculture productivity, food security, policy formulation and implementation, which is key to transformational development. In the Feed the Future (FTF) results framework, this indicator measures Intermediate Result (IR) 1: Improved Agricultural Productivity and Sub IR 1.1: Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity.

UNIT: Number

DISAGGREGATE BY:

Value chain: Seed, Fertilizer

Type of individual:

- Producers (farmers, fishers, pastoralists, ranchers, etc.)
- People in government (e.g. policy makers, extension workers)
- People in private sector firms (e.g. processors, service providers, manufacturers)
- People in civil society (e.g. NGOs, CBOs, CSOs, research and academic organizations)

Note: While producers are included under MSMEs under indicator EG.3.2-3, only count them under the Producers and not the Private Sector Firms disaggregate to avoid double-counting. While private sector firms are considered part of civil society more broadly, only count them under the Private Sector Firms and not the Civil Society disaggregate to avoid double-counting.

Sex: Male, Female

Caste/ethnicity: Disadvantaged Social Groups (DSG), non-DSG

DSG include Dalit, Janajati and Muslim [ref. [USAID/Nepal 2014-2019 Performance Management Plan](#)]

DATA SOURCE: Annual recurrent survey

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiaries

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Recurrent survey

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Year 1 of Annual recurrent survey serves as project baseline

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION: National

Data Reporting Units: N/A

Baseline Units (*optional*): yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 1 (Apr 2016-Sept 2016)

When will be the baseline data available?; 1 Jan 2017

Are you setting targets for this indicator once the baseline data is available? If yes, indicate that.

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-4 (formerly 4.5.2[11]):
Number of for-profit private enterprises, producers organizations, water users associations,
women's groups, trade and business associations, and community-based organizations (CBOs)
receiving USG food security related organizational development assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.2: Small Enterprise Opportunities Expanded/Sub-IR 2.2.1: Entrepreneurial Skills Strengthened

SPS LOCATION: Program Element 3.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 1: Improved Agricultural Productivity / Sub IR 1.1: Enhanced human and institutional capacity development for increased sustainable agriculture

INDICATOR TITLE: : EG.3.2-4 Number of for-profit private enterprises, producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG food security related organizational development assistance

INDICATOR TYPE: IM- RIA/WOG; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes X If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator counts the number of private enterprises, producers' associations, cooperatives, producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations, including those focused on natural resource management, that received USG assistance related to food security during the reporting year. This assistance includes support that aims at organization functions, such as member services, storage, processing and other downstream techniques, and management, marketing, and accounting. "Organizations assisted" should only include those organizations for which implementing partners have made a targeted effort to build their capacity or enhance their organizational functions.

Count the number of organizations and not the number of members, even in the case of training or assistance to farmer's association or cooperatives, where individual farmers are not counted separately, but as one entity.

RATIONALE:

Tracks private sector and civil society increased capacity that is essential to building agricultural sector productivity. In the Feed the Future (FTF) results framework, this indicator contributes to

Intermediate Results (IR) 1 Improved Agricultural Productivity and Sub IR 1.1 Enhanced Human and Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity.

UNIT: Number

DISAGGREGATE BY:

Type of organization: For-profit private enterprises; producers organizations; water users associations; women's groups; trade and business associations; community-based organizations (CBOs)

New/Continuing: New (the entity is receiving USG assistance for the first time during the reporting year); Continuing (the entity received USG assistance in the previous year and continues to receive it in the reporting year)

DATA SOURCE: Implementing partners records and reports

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiary organizations

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Activity records of training and various USG assistance for these specific types of organizations/associations

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not Required

Rationale for Targets (*optional*):

Other Notes (optional):

GEOGRAPHIC DIMENSION ; District

Data Reporting Units: N/a

Baseline Units (*optional*): Yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 1 (Apr 2016-Sept 2016)

When will be the baseline data available?; N/A

Are you setting targets for this indicator once the baseline data is available? No

**Activity Performance Indicator Reference Sheet – Indicator No EG.3.2-3 (formerly 4.5.2[30]):
Number of micro, small, and medium enterprises (MSMEs), including farmers, receiving
agricultural-related credit as a result of USG assistance**

NSAF Project Goal: Build competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.2: Small Enterprise Opportunities Expanded/

SPS LOCATION: Program Element 4.5.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 2: Expanding Markets & Trade and Sub IR 2.4: Improved access to business development and sound and affordable financial and risk

INDICATOR TITLE: EG.3.2-3 Number of micro, small, and medium enterprises (MSMEs), including farmers, receiving agricultural-related credit as a result of USG assistance

INDICATOR TYPE: IM-RAA; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator counts the total number of micro (1-10 employees), small (11-50 employees), and medium (51-100 employees) enterprises (MSMEs) that have received USG assistance that resulted in a loan during the reporting year.

The loan can be from a formal or informal financial institution, including a micro-finance institution (MFI), commercial bank, or informal lender, or from an in-kind lender of equipment (e.g. tractor, plow), agricultural inputs (e.g., fertilizer or seeds), or transport, with repayment in cash or in kind. USG assistance may include partial loan guarantee programs or any support facilitating the receipt of a loan.

Number of employees refers to full time-equivalent workers during the reporting year. MSMEs include producers (farmers). Producers should be classified as micro, small or medium-enterprise based on the number of FTE workers hired (permanent and/or seasonal) during the previous 12 months. If a producer does not hire any permanent or seasonal labor, s/he should be considered a micro-enterprise.

The indicator does not measure the value of the loans, but the number of MSMEs that received USG assistance and accessed loans. Only count the MSME once per reporting year, even if multiple loans are accessed.

RATIONALE:

The lack of access to financial capital is frequently cited as a major impediment to the development of MSMEs, thus helping MSMEs access loans is likely to increase investment and the value of output (production in the case of farmers, value added for agricultural processing). This will directly contribute to the expansion of markets, increased agricultural productivity, and the reduction of poverty. In the Feed the Future (FTF) results framework, this indicator measures progress relating to Intermediate Result (IR) 2: Expanding Markets & Trade and Sub IR 2.4: Improved access to business development and sound and affordable financial and risk management services.

UNIT: Number

DISAGGREGATE BY:

Size: Micro, Small, Medium

Sex of owner/producer: Male, Female, Joint, n/a

If the enterprise is a single proprietorship, the sex of the proprietor should be used for classification. For larger enterprises, the majority ownership should be used. When this cannot be ascertained, the majority of the senior management should be used. If this cannot be ascertained, use n/a (not available)

Caste/ethnicity of owner/producer: Disadvantaged Social Groups (DSG), non-DSG

DSGs include Dalit, Janajati and Muslim [ref. [USAID/Nepal 2014-2019 Performance Management Plan](#)]

DATA SOURCE: Implementing partner activity records, MSME financial records, etc.

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiaries.

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Activity records, MSME financial records, etc.

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not required

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION; National

Data Reporting Units: N/A

Baseline Units (*optional*): Yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 2 (Oct 2016- Sept 2017)

When will be the baseline data available?; N/A

Are you setting targets for this indicator once the baseline data is available? No

**Activity Performance Indicator Reference Sheet – Indicator No. EG.5.2-1 (formerly 4.5.2[37]):
Number of firms receiving USG-funded technical assistance for improving business performance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project-specific Sub-IR 2.1.1: Agricultural Productivity Increased AND Sub-IR 2.1.2: Value Chains Strengthened AND IR 2.2: Small Enterprise Opportunities Expanded AND Sub-IR 2.4.2: Private sector service delivery improved

SPS LOCATION: Program Element EG.5.2 (Cross-linked)

INITIATIVE AFFILIATION: Feed the Future – IR 2: Expanding Markets & Trade and Sub IR 2.4: Improved access to business development and sound and affordable financial and risk management services

INDICATOR TITLE: EG.5.2-1 Number of firms receiving USG-funded technical assistance for improving business performance

INDICATOR TYPE: IM- S; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes **X** If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

Firms can be formal or informal. If multiple owners, managers or workers in a single firm receive technical assistance over the reporting period, the reporting operating unit should count that as one benefiting firm for the reporting period.

Technical assistance includes the transfer of knowledge and/or expertise by way of staff, formal or informal skills training, and research work to support quality of program implementation and impact, support administration, management, representation, publicity, policy development and capacity building. The technical assistance should have the explicit goal of improving business performance in terms of profit and revenue or employment through improving management or workers' generic financial or management practices, or industry or market-specific knowledge and practices. Technical assistance includes both human and institutional resources.

Technical assistance does not include financial assistance. USG funding: For the purpose of this indicator, OUs can count technical assistance that was delivered in full or in part as a result of USG assistance. This may include providing funds to pay teachers, providing training facilities, or other key contributions necessary to ensure training is delivered. This indicator does not automatically count any course for which the USG helped develop the curriculum, but rather focuses on delivery of capacity-building or courses made possible through full or partial funding or in-kind support from the USG.

RATIONALE:

Technical assistance should improve firm productivity, profits and employment, and therefore broad-based economic growth in the host country/countries.

UNIT: Number

DISAGGREGATE BY:

Value chain: Seed, Fertilizer

Type of Firm: Formal, informal

Duration: New, continuing

New firms are those that did not receive assistance reportable under this indicator in the previous reporting period; continuing firms are those that received assistance reportable under this indicator in the previous reporting period.

DATA SOURCE: Implementing partner

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity-level, direct beneficiaries

WHO COLLECTS DATA FOR THIS INDICATOR: Implementing partners

HOW SHOULD IT BE COLLECTED: Reports, activity records, program data

FREQUENCY OF COLLECTION: Annual

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be compiled by the Nepal Seed & Fertilizer project's M&E staff from the Project Coordinator, technical leads and/or socio-economics staff in preparation for reporting.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not required

Rationale for Targets (*optional*):

Other Notes (*optional*):

GEOGRAPHIC DIMENSION ; National

Data Reporting Units: N/A

Baseline Units (*optional*):

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 1 (Apr 2016- Sept 2016)

When will be the baseline data available?; N/A

Are you setting targets for this indicator once the baseline data is available? No

**Activity Performance Indicator Reference Sheet – Indicator No. EG.3.2-19 (formerly 4.5.2[23]):
Value of small-holder incremental sales generated with USG assistance**

NSAF Project Goal: Build a competitive and synergistic seed and fertilizer value chains for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal.

Project specific IR 2.4: Economic Growth Policy and Performance Improved / Sub-IR 2.4.1: Increased Access to Markets AND Sub-IR 2.4.2: Private Sector Service Delivery Improved

SPS LOCATION: Program Element 3.2: Agricultural Sector Capacity

INITIATIVE AFFILIATION: Feed the Future – IR 2: Expanding Markets & Trade and Sub IR 2.4: Improved access to business development and sound and affordable financial and risk

INDICATOR TITLE: EG.3.2-19 Value of small-holder incremental sales generated with USG assistance

INDICATOR TYPE: IM-RAA; Output

Performance Plan and Report (PPR) Indicator: No ___ Yes X If yes, for which Fiscal Year(s): 2016; If yes, link to foreign assistance framework:

PERFORMANCE INDICATOR DEFINITION:

This indicator collects both volume (in metric tons) and value (in US dollars) of sales of targeted commodities from small-holder direct beneficiaries for its calculation. This includes all sales by the small-holder direct beneficiaries of the targeted commodity(ies), not just farm- gate sales. Only count sales in the reporting year that are attributable to the Feed the Future investment, i.e. where Feed the Future assisted the individual farmer directly. Examples of Feed the Future assistance include facilitating access to improved seeds, other inputs, extension services, markets and other activities that benefited small-holders.

The value of incremental sales measures the value (in USD) of the total amount of targeted agricultural products sold by small-holder direct beneficiaries relative to a base year and is calculated as the total value of sales of a product (crop, animal, or fish) during the reporting year minus the total value of sales in the base year.

The number of direct beneficiaries of Feed the Future activities often increases over time as the activity rolls out. Unless an activity has identified all prospective direct beneficiaries at the time the baseline is established, the baseline sales value will only include sales made by beneficiaries identified when the baseline is established during the first year of implementation. The baseline sales value will not include the “baseline” sales made prior to their involvement in the Feed the Future activity by beneficiaries added in subsequent years. Thus the baseline sales value will underestimate total baseline sales of all beneficiaries, and consequently overestimate incremental sales for reporting years when the beneficiary base has increased. To address this issue, Feed the Future requires **reporting the number of direct beneficiaries for each value chain commodity along with baseline and reporting year**

sales. FTFMS uses the baseline sales and baseline number of beneficiaries to establish average sales per beneficiary at baseline. The average sales per beneficiary are multiplied by the number of beneficiaries in each reporting year to create an adjusted baseline sales value. To accurately estimate out-year targets for incremental sales, targets for number of beneficiaries are also required.

It is **absolutely essential that a Baseline Year Sales data point be entered**. The Value of Incremental Sales indicator value cannot be calculated without a value for Baseline Year Sales. If data on the total value of sales of the value chain commodity by direct beneficiaries prior to Feed the Future activity implementation started is not available, do not leave the baseline blank or enter '0'. Use the earliest Reporting Year Sales actual as the Baseline Year Sales. This will cause some underestimation of the total value of incremental sales achieved by the Feed the Future activity, but this is preferable to being unable to calculate incremental sales at all.

If a direct beneficiary sample survey is used to collect data for this indicator, the sample weighted estimate of total baseline or reporting year sales value and volume for all small-holder beneficiaries under each commodity must be calculated using appropriate sample weights before being entered into FTFMS to ensure accurate calculation of weighted averages across all implementing mechanisms at the Operating Unit level as well as across all Feed the Future countries for global reporting.

Note that quantity of sales is part of the calculation for gross margin under indicator *EG.3-6,7,8 Gross margin*, and in most cases should be the same as the value reported here.

Please refer to the Feed the Future Agricultural Indicators Guide (<https://agrilinks.org/library/feed-the-future-ag-indicators-guide>) for collecting and interpreting the data required for this indicator.

RATIONALE:

Value (in US dollars) of purchases from small-holders of targeted commodities is a measure of the competitiveness of those small-holders. This measurement also helps track access to markets and progress toward commercialization by small-holder farmers. Improving markets will contribute to the Key Objective of increased agricultural productivity and production, which in turn will reduce poverty and thus achieve the goal. Lower level indicators help set the stage to allow markets and trade to expand. This indicator relates to IR 2: Expanding Markets and Trade in the Feed the Future (FTF) results framework.

UNIT: US Dollar

DISAGGREGATE BY:

In FTFMS: Commodity

In FACTSInfo: Commodity group: Cereals; Dry grain pulses and legumes; roots, tubers and other staples; horticulture; other

Note: Horticultural product-specific disaggregation is not required for the Incremental Sales indicator; the overall "Horticulture" commodity disaggregate can be used if desired. Partners may also choose to report only on sales of the five most important horticultural products, but this is not recommended.

DATA SOURCE: Implementing partner

MEASUREMENT NOTES:

LEVEL OF COLLECTION: Activity level; those affected by USG activity reach

WHO COLLECTS DATA FOR THIS INDICATOR: Ideally, implementing partner will collect in a census of all target beneficiaries. Sample survey-based approaches are also acceptable.

HOW SHOULD IT BE COLLECTED: The value of incremental sales can be collected directly from a census or sample of farmer beneficiaries, from recorded sales data by farmer's associations, from farm records.

FREQUENCY OF COLLECTION: Annually reported

Individual(s) Responsible for Data at USAID: Nepal Seed and Fertilizer Project coordinator

Individual(s) Responsible for Providing Data to USAID: M&E specialist

Location of Data Storage (*optional*): CIMMYT Nepal centralized, automatic data storage repository

DATA QUALITY ISSUES

Date of Most Recent Data Quality Assessment and Name(s) of Reviewer(s): N/A

Date of Future Data Quality Assessments: Before 31 March 2017

Known Data Limitations and Significance:

Actions Taken or Planned to Address Data Limitations:

PLAN FOR DATA ANALYSIS, REVIEW, & REPORTING

Data Analysis (*optional*): Data will be analyzed by the Nepal Seed & Fertilizer project's M&E staff, technical leads and/or socio-economics staff in preparation for reporting via progress reports and indicator data submission.

Team Review (*optional*): Annually

BASELINE AND TARGETS

Baseline Timeframe (*optional*): Not required

Rationale for Targets (*optional*):

Other Notes (optional):

GEOGRAPHIC DIMENSION ; National

Data Reporting Units: N/A

Baseline Units (*optional*): Yes

CHANGES TO PERFORMANCE INDICATOR

Changes to Indicator:

THIS SHEET WAS LAST UPDATED ON: 16 August, 2016

In which Fiscal Year to be reported this indicators' result? Year 2

When will be the baseline data available?; January 2017

Are you setting targets for this indicator once the baseline data is available? Yes

6.3 ANNEX 3: WORK BREAKDOWN STRUCTURE AND BASELINE SCHEDULE

Task Name	Start	Finish
IR2.1: Agriculture-based income increased	Fri 4/1/16	Wed 3/31/21
Sub-IR2.1.1: Agricultural productivity increased	Fri 4/1/16	Mon 9/30/19
2.1.1.1: Seed testing, monitoring and deployment systems strengthened	Wed 6/1/16	Mon 9/30/19
2.1.1.1.1: Fine-map target regions in nepal (in terms of agro- ecological zones, cropping systems, and market potential)	Wed 6/1/16	Mon 1/30/17
2.1.1.1.1.1.: Generate a GIS extrapolation of the target agro-ecological zones	Wed 6/1/16	Fri 9/30/16
2.1.1.1.1.2: Map out the prevalent cropping systems	Wed 6/1/16	Sat 12/31/16
2.1.1.1.1.3: Map out the seed market potential for target crops	Wed 6/1/16	Sat 12/31/16
2.1.1.1.1.4: Identify the key market segments for target crops	Sun 1/1/17	Mon 1/30/17
2.1.1.1.2: Characterize market segments and define product portfolios	Sun 1/1/17	Wed 3/1/17
2.1.1.1.2.1: Characterize three key market segments for rice & Maize and 2 for Lentil & vegetables	Sun 1/1/17	Tue 1/31/17
2.1.1.1.2.2: Define product portfolio for each crop segment and a varietal selection indicators	Wed 2/1/17	Wed 3/1/17
2.1.1.1.3: Test technologies at Phase 1 (TRPs & MLTs)	Sat 10/1/16	Wed 11/15/17
2.1.1.1.3.1 Evaluate improved pre-commercial/released hybrids/OPVs from diverse sources at TRPs based on varietal selection indicators defined for product portfolios	Tue 11/1/16	Fri 6/30/17
2.1.1.1.3.1.1: Evaluate Varieties at TRPS as per product portfolio - Kharif 2017	Tue 11/1/16	Sat 12/31/16
2.1.1.1.3.1.2: Evaluate Varieties at TRPS as per product portfolio - Rabi 2017	Mon 5/1/17	Fri 6/30/17
2.1.1.1.3.2 Conduct joint monitoring of the trials and report on the best-bet hybrids/OPVs in specific target crops/agro-ecologies	Wed 3/15/17	Wed 11/15/17
2.1.1.1.3.2.1: Joint monitoring of trials and report on selected Varieties: 2017 Kharif	Wed 3/15/17	Sat 4/15/17
2.1.1.1.3.2.1: Joint monitoring of trials and report on selected Varieties: 2017 Rabi	Fri 9/15/17	Wed 11/15/17
2.1.1.1.3.3 Select the top 20 best-bet hybrids/OPVs for MLT stage of testing	Sat 4/15/17	Tue 10/31/17
2.1.1.1.3.3.1: Select top 20 best bet hybrids/varieties for MLT stage of testing - 2017 Kharif	Sat 4/15/17	Mon 5/15/17
2.1.1.1.3.3.2: Select top 20 best bet hybrids/varieties for MLT stage of testing - 2016 Rabi	Sun 10/1/17	Tue 10/31/17
2.1.1.1.3.4: Conduct 5 Multilocation Trials of varieties for each market segment	Sat 10/1/16	Tue 5/30/17
2.1.1.1.3.4.1: Conduct 5 Multilocation Trials of varieties for each market segment - dry season	Sat 10/1/16	Wed 11/30/16
2.1.1.1.3.4.2: Conduct 5 Multilocation Trials of varieties for each market segment - wet season	Sat 4/1/17	Tue 5/30/17
2.1.1.1.3.5: Conduct joint monitoring of trials and report on selected Varieties	Wed 3/15/17	Sat 9/30/17
2.1.1.1.3.5.1: Joint monitoring of trials and report on selected Varieties - Kharif 2017	Wed 3/15/17	Fri 3/31/17
2.1.1.1.3.5.2: Joint monitoring of trials and report on selected Varieties - Rabi 2017	Fri 9/15/17	Sat 9/30/17
2.1.1.1.3.6: Select The best 6 hybrids/OPVs for Farmer field testing (FFT)	Sat 4/15/17	Tue 10/31/17

Task Name	Start	Finish
2.1.1.1.3.6.1: Select The best 6 hybrids/OPVs for Farmer field testing (FFT) - 2017 dry season	Sat 4/15/17	Sun 4/30/17
2.1.1.1.3.6.2: Select The best 6 hybrids/OPVs for Farmer field testing (FFT) - 2017 wet season	Sun 10/15/17	Tue 10/31/17
2.1.1.1.4: Large-scale testing of high potential TRP technologies in target ecologies in participatory mode- Phase II	Wed 3/15/17	Tue 4/30/19
2.1.1.1.4.1: Large-scale testing of high potential TRP technologies in target ecologies in participatory mode (Phase II testing): 2016 wet season	Thu 6/1/17	Wed 10/31/18
2.1.1.1.4.1.1: Conduct FFT at 20 locations per market segment, involving NARC, Seed partners, NGOs, DADOs.	Thu 6/1/17	Thu 11/30/17
2.1.1.1.4.1.2: Joint monitoring of 25% trials and report on selected Varieties	Fri 9/15/17	Sat 9/30/17
2.1.1.1.4.1.3: Select the best 1 hybrids/varieties for on-farm demonstrations (OFD)	Sun 10/1/17	Tue 10/31/17
2.1.1.1.4.1.4: Conduct OFD at 50 locations per segment involving NARC, Seed partners, NGOs, DADOs etc.	Thu 11/30/17	Thu 11/30/17
2.1.1.1.4.1.5: Joint monitoring of 10% trials and report on selected Varieties	Sat 9/15/18	Sun 9/30/18
2.1.1.1.4.1.6: Conduct Field days at 10% OFD locations	Mon 10/15/18	Wed 10/31/18
2.1.1.1.4.2: Large-scale testing of high potential TRP technologies in target ecologies in participatory mode (Phase II testing): 2017 dry season	Wed 3/15/17	Tue 4/30/19
2.1.1.1.4.2.1: Conduct FFT at 20 locations per market segment, involving NARC, Seed partners, NGOs, DADOs.	Fri 12/1/17	Mon 4/30/18
2.1.1.1.4.2.2: Joint monitoring of 25% trials and report on selected Varieties	Thu 3/1/18	Sat 3/31/18
2.1.1.1.4.2.3: Select the best 1 hybrids/varieties for on-farm demonstrations (OFD)	Sat 4/1/17	Sun 4/30/17
2.1.1.1.4.2.4: Conduct OFD at 50 locations per segment involving NARC, Seed partners, NGOs, DADOs etc.	Tue 12/12/17	Mon 4/30/18
2.1.1.1.4.2.5: Joint monitoring of 10% trials and report on selected Varieties	Wed 3/15/17	Fri 3/31/17
2.1.1.1.4.2.6: Conduct Field days at 10% OFD locations	Mon 4/1/19	Tue 4/30/19
2.1.1.1.5: Release & deployment of technologies	Wed 11/1/17	Mon 9/30/19
2.1.1.1.5.1 Allocate/license varieties to national program/seed company partners	Wed 11/1/17	Fri 8/31/18
2.1.1.1.5.1.1: Allocate/license varieties to national program/seed company partners 2017B	Wed 11/1/17	Wed 1/31/18
2.1.1.1.5.1.2: Allocate/license varieties to national program/seed company partners - 2018A	Fri 6/1/18	Fri 8/31/18
2.1.1.1.5.2: Submission of proposal for Registration/ release of cultivars	Sat 12/1/18	Mon 9/30/19
2.1.1.1.5.2.1: Submission of proposal for Registration/ release of cultivars	Sat 12/1/18	Sun 3/31/19
2.1.1.1.5.2.2: Submission of proposal for Registration/ release of cultivars	Sat 6/1/19	Mon 9/30/19
2.1.1.1.6: Conduct seed production research on hybrids and scale up identified OPV seed for trials	Sat 10/1/16	Tue 4/30/19
2.1.1.1.6.1: Seed production research on parents best-bet hybrids and Opvs	Sun 10/1/17	Wed 5/30/18
2.1.1.1.6.1.1: Conduct Seed production research on parental lines of FFT stage maize hybrids in 3 sites	Sun 10/1/17	Mon 4/30/18
2.1.1.1.6.1.2: Conduct Seed production research on parental lines of FFT stage rice hybrids in 3 sites	Sun 10/1/17	Mon 4/30/18
2.1.1.1.6.1.3: Publish SPR data	Mon 4/30/18	Wed 5/30/18

Task Name	Start	Finish
2.1.1.1.6.2: Scale-up identified OPV seed for trials	Sat 10/1/16	Tue 4/30/19
2.1.1.1.6.2.1: Multiply the seed of selected OPVs for MLT	Sat 10/1/16	Sun 4/30/17
2.1.1.1.6.2.2: Multiply the seed of selected OPVs for FFT	Sat 10/1/16	Sun 4/30/17
2.1.1.1.6.2.3: Multiply the seed of selected OPVs for OFD	Sun 10/1/17	Mon 4/30/18
2.1.1.1.6.2.4: Multiply the Breeder seed of selected OPVs in FFT	Sat 10/1/16	Sun 4/30/17
2.1.1.1.6.2.5: Multiply the Foundation seed of selected OPVs in OFD	Sun 10/1/17	Mon 4/30/18
2.1.1.1.6.2.6: Multiply the Breeder & Foundation seed of Released OPVs	Mon 10/1/18	Tue 4/30/19
2.1.1.1.7: Testing of Germplasm/parental lines	Thu 6/1/17	Wed 5/30/18
2.1.1.1.7.1: Evaluate parental lines for combining ability, abiotic and biotic stress resilience and portfolio traits	Thu 6/1/17	Mon 4/30/18
2017A 2.1.1.1.7.1.1: Evaluate parental lines for combining ability, abiotic and biotic stress resilience and portfolio traits -	Thu 6/1/17	Sat 9/30/17
2017B 2.1.1.1.7.1.2: Evaluate parental lines for combining ability, abiotic and biotic stress resilience and portfolio traits -	Sun 10/1/17	Mon 4/30/18
2.1.1.1.7.2: Select ten elite parental lines and distribute for developing new hybrids	Sun 10/1/17	Wed 5/30/18
2.1.1.1.7.2.1: Select ten elite parental lines and distribute for developing new hybrids: 2017A	Sun 10/1/17	Tue 10/31/17
2.1.1.1.7.2.2: Select ten elite parental lines and distribute for developing new hybrids: 2017B	Tue 5/1/18	Wed 5/30/18
2.1.1.2: Production and the farmer's adoption of quality seeds increased	Mon 8/1/16	Fri 8/31/18
2.1.1.2.1: Mapping of suitable seed production & processing zones for target crops	Mon 8/1/16	Fri 8/31/18
2.1.1.2.1.1: Fine-map mega-environment of Nepal to identify suitable, areas and seasons for seed production of hybrid maize, Hybrid rice, vegetables	Mon 8/1/16	Fri 3/31/17
2.1.1.2.1.2: Validate the perspective zones based on pilot testing and economic analysis.	Sun 10/1/17	Tue 5/1/18
2.1.1.2.1.3: Publish recommendation on seed production zones in Nepal	Fri 6/1/18	Fri 8/31/18
2.1.1.2.2: Improving the capacity of seed processing facilities and storage structures	Mon 8/1/16	Tue 2/28/17
2.1.1.2.2.1: Technical Support to CDD to establish & maintain seed processing & seed storage facilities, under G2G funding	Mon 8/1/16	Fri 9/30/16
2.1.1.2.2.2: Provide training to CDD staff on seed processing and storage	Sat 10/1/16	Tue 2/28/17
2.1.1.2.3: Strengthen breeder and foundation seed capacity in target crops	Mon 8/1/16	Mon 10/31/16
2.1.1.2.3.1: Provide technical support to SQCC to establish processes for sustainable production of source seed of pre-released and newly released varieties, under G2G funding	Mon 8/1/16	Mon 10/31/16
2.1.1.2.4: Strengthening of International Seed Testing Association (ISTA)-accredited quality control lab under SQCC/RSTL under CDD	Mon 8/1/16	Fri 3/31/17
2.1.1.2.4.1: Technical support to SQCC & CDD to strengthening the Seed quality programs , under G2G funding	Mon 8/1/16	Fri 3/31/17

Task Name	Start	Finish
2.1.1.2.4.2: Train staff of SQCC & CDD Seed quality assurance and efficient use and maintenance of seed quality control facilities	Sat 10/1/16	Mon 10/31/16
2.1.1.3: Domain-specific ISFM recommendations developed and deployed	Fri 4/1/16	Wed 5/30/18
2.1.1.3.1: Identify and characterize reference sites for soil, cropping system, farmer management, and socioeconomic factors	Fri 4/1/16	Fri 3/31/17
2.1.1.3.2: Conduct on-farm experiments for nutrient (macro, secondary, and micro) and lime responses at reference sites	Fri 7/1/16	Fri 3/31/17
2.1.1.3.3: Spatial patterns of indigenous soil fertility and crop responses to fertilizers evaluated for recommendation domain delineation	Sun 10/1/17	Wed 5/30/18
2.1.1.3.4: Yield prediction (e.g. satellite, 'factor'-based, and weather forecast) methods assessed for 'fine tuning' domain-based recommendations	Sun 10/1/17	Wed 5/30/18
2.1.1.3.5: Scenario analysis conducted to refine recommendations based on farmer resource endowments, risk, and investment preferences at nested scales	Sun 10/1/17	Wed 5/30/18
2.1.1.3.6: Participatory on-farm validation of domain-based fertility recommendations, including GxExM (refine based on SEED screening trial results)	Sun 10/1/17	Wed 5/30/18
2.1.1.3.7: Simple, multi-media extension messages and materials developed for different farmer groups including women	Sun 10/1/17	Wed 5/30/18
2.1.1.3.8: The importance of micronutrient fertilization for crop quality determined for tomato and cauliflower	Sun 10/1/17	Wed 5/30/18
2.1.1.4 : Efficient fertilizer application technologies evaluated and commercialized	Wed 6/1/16	Fri 3/31/17
2.1.1.4.1: Evaluate precision broadcasting and other efficient fertilizer application methods for technical performance and farmer acceptance	Wed 6/1/16	Fri 3/31/17
2.1.1.4.2: Employ market development strategies with trade associations and service providers to out-scale precision application technologies	Wed 6/1/16	Fri 3/31/17
Sub-IR2.1.2: Value Chains Strengthened	Fri 4/1/16	Wed 3/31/21
2.1.2.1. Seed system management scaled through researchers, seed companies, dealers, retailers, seed producers and development agencies. (Note: also linked with 2.1.1.3)	Fri 4/1/16	Wed 3/31/21
2.1.2.1.1: Establish germplasm sharing system among NARC, Seed Partners, International Research and seed agencies	Wed 6/1/16	Fri 3/31/17
2.1.2.1.1.1: Generate a document on a tripartite mechanism between private seed companies, NARC and CGIAR institutes for germplasm access and capacity building of breeding programs	Wed 6/1/16	Mon 10/31/16
2.1.2.1.1.2: Establish an NSAF-PPP Coordination Cell to oversee the tripartite PPP mechanism	Wed 6/1/16	Mon 10/31/16
2.1.2.1.1.3: Enable NARC to become a member of two consortia (IMIC-Asia and HRDC)	Wed 6/1/16	Mon 10/31/16
2.1.2.1.1.4: Design a mechanism for licensing improved hybrids/OPVs from NARC to local seed companies	Wed 6/1/16	Fri 3/31/17
2.1.2.1.1.5: Develop policy documents establishing the principles of germplasm exchange and licensing to be implemented by NARC	Wed 6/1/16	Fri 3/31/17

Task Name	Start	Finish
2.1.2.1.2: Establish Market Oriented research Consultative forum (MORCF) of researchers, input suppliers and end users	Fri 7/1/16	Wed 3/31/21
2.1.2.1.2.1: Design Market Oriented research Consultative forum (MORCF)	Fri 7/1/16	Fri 9/30/16
2.1.2.1.2.2: Meet semi-annually and document recommendations	Sat 10/1/16	Wed 3/31/21
2.1.2.1.3: Establish Technology Refinement Platform (TRP) to screen sourced Hybrids & OPVs	Wed 6/1/16	Sat 12/31/16
2.1.2.1.3.1: Establish TRP at RARS, Khajura, Nepalgunj,	Wed 6/1/16	Mon 10/31/16
2.1.2.1.3.2: Establish TRP at NARC Kumualtar.	Wed 6/1/16	Mon 10/31/16
2.1.2.1.3.3: Establish TRP at NSC Siddahara, Arghakhanchi	Wed 6/1/16	Sat 12/31/16
2.1.2.1.4: Source high-yielding, climate-resilient, improved hybrids and opvs for testing	Fri 4/1/16	Wed 3/31/21
2.1.2.1.4.1: Provide a list of improved pre-commercial/released hybrids/OPVs in the target crops to be sourced nationally/internationally by NARC	Fri 7/1/16	Wed 3/31/21
2.1.2.1.4.2: Receive seed of the identified rice hybrids/OPVs from NARC and other project partners for constituting the trials	Fri 4/1/16	Wed 3/31/21
2.1.2.1.4.3: Receive seed of identified maize hybrids/OPVs from NARC and other project partners for constituting the trials	Fri 4/1/16	Wed 3/31/21
2.1.2.1.4.4: Receive seed of identified improved lentil OPVs from NARC and other project partners for constituting the trials	Fri 4/1/16	Wed 3/31/21
2.1.2.1.4.5: Receive seed of identified improved hybrids/OPVs of high-value vegetables (tomato, onion and cauliflower) from NARC and other project partners for constituting the trials	Fri 4/1/16	Wed 3/31/21
2.1.2.1.5: Source parental lines in Hybrid crops	Wed 3/15/17	Wed 5/31/17
2.1.2.1.5.1: Source advanced maize inbred lines, including CIMMYT Maize Lines (CMLs) adapted to Asia from CIMMYT, including IMIC-Asia	Wed 3/15/17	Wed 5/31/17
2.1.2.1.5.2: Source advanced parental lines of rice hybrids from the Hybrid Rice Development Consortium (HRDC), led by IRRI	Wed 3/15/17	Wed 5/31/17
2.1.2.2: : NARES partners have increased capacity for developing and extending ISFM technologies	Fri 4/1/16	Wed 3/31/21
2.1.2.2.1: Provide practical instruction in advanced laboratory-based soil analysis	Fri 4/1/16	Fri 9/30/16
2.1.2.2.2: Provide practical instruction in advanced geo-spatial land evaluation and mapping methods	Sun 1/1/17	Sat 9/30/17
2.1.2.2.3: Provide introduction to the principles of integrated soil fertility management	Sat 10/1/16	Fri 3/31/17
2.1.2.2.4: Introduction to the design, evaluation, and interpretation of field experiments for nutrient management assessments	Sat 7/1/17	Sun 12/31/17
2.1.2.2.5: Methods for crop yield forecasting operationalized for Nepal: the forgotten 'half' of precision fertility management	Mon 1/1/18	Sat 6/30/18

Task Name	Start	Finish
2.1.2.2.6: Aggregate historical data on soils characterization and rate recommendations	Wed 6/1/16	Wed 3/31/21
2.1.2.2.6.1: Compile soil survey data	Wed 6/1/16	Sat 12/31/16
2.1.2.2.6.2: Compile field trial data	Sun 1/1/17	Fri 6/30/17
2.1.2.2.6.3: Maintain database	Sat 7/1/17	Wed 3/31/21
2.1.2.2.7: Curate spatial data for accessibility - mobilizing SMD data for decision making	Sat 4/1/17	Wed 3/31/21
2.1.2.2.8: Provide introduction to methods for quantifying farmer preferences and incentives for investment in soil fertility management	Sun 1/1/17	Fri 6/30/17
2.1.2.2.9: Policy options evaluated for stimulating private investment in fertilizer supply and distribution (exposure visit to other countries)	Sat 10/1/16	Sun 12/31/17
IR2.2: Small enterprise opportunities expanded	Fri 4/1/16	Tue 3/31/20
Sub-IR2.2.1: Entrepreneurial skills strengthened	Fri 4/1/16	Tue 3/31/20
2.2.1.1: Seed research and business partner capacity enhanced	Sat 10/1/16	Tue 3/31/20
2.2.1.1.1: Enhance capacity of institutions along Nepal's seed sector value chain	Sat 10/1/16	Tue 3/31/20
2.2.1.1.1.1: Train Subject Matter Specialists (SMS) on seed value chain areas (once in two years)	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.1: Train SMS in crop breeding	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.2: Train SMS in Product development	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.3: Train SMS in Seed production	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.4: Train SMS in seed processing	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.5: Train SMS in Seed quality	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.6: Train SMS in Seed sales and marketing	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.1.7: Train SMS in Seed business account & finance	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.2: Train CBSPs, NGOs and seed partners in seed production, business development / marketing (pre-season)	Sat 10/1/16	Mon 10/31/16
2.2.1.1.1.3: Train R&D staff on precision phenotyping for abiotic & biotic stress tolerance & quality traits	Wed 3/1/17	Sat 3/31/18
2.2.1.1.1.3.1: Workshop on precision phenotyping of product folio traits in Maize (once in 2 years)	Wed 3/1/17	Fri 3/31/17
2.2.1.1.1.3.2: Workshop on precision phenotyping of product folio traits in Rice	Wed 3/1/17	Fri 3/31/17
2.2.1.1.1.3.3: Workshop on precision phenotyping of product folio traits in Lentil	Thu 3/1/18	Sat 3/31/18
2.2.1.1.1.3.4: Workshop on precision phenotyping of product folio traits in vegetables	Thu 3/1/18	Sat 3/31/18
2.2.1.1.1.4: Support Curriculum development for short courses on seed system	Sat 10/1/16	Sat 3/31/18
2.2.1.1.1.4.1: Develop the curriculum for certificate and diploma courses in Seed technology	Sat 10/1/16	Fri 3/31/17
2.2.1.1.1.4.2: Develop the curriculum for certificate and diploma courses on Seed business management	Thu 3/1/18	Sat 3/31/18
2.2.1.1.1.5: Support NARC scientists on Masters / Doctoral program in Hybrid breeding & Seed technology	Sat 4/1/17	Tue 3/31/20

Task Name	Start	Finish
2.2.1.1.1.5.1: One Fellowship for Masters / Doctoral program in Hybrid rice breeding	Sat 4/1/17	Tue 3/31/20
2.2.1.1.1.5.2: One Fellowship for Masters / Doctoral program in Hybrid maize breeding	Sat 4/1/17	Tue 3/31/20
2.2.1.1.1.5.3: One Fellowship for Masters / Doctoral program in Hybrid vegetable breeding	Sat 4/1/17	Tue 3/31/20
2.2.1.1.1.5.4: One Fellowship for Masters / Doctoral program in seed technology	Sun 4/1/18	Tue 3/31/20
2.2.1.1.1.6: Develop Technical troubleshooting modules (TSM) for Advisory services of partners	Mon 10/31/16	Sun 12/31/17
2.2.1.1.1.6.1: Develop TSM for Maize	Mon 10/31/16	Fri 3/31/17
2.2.1.1.1.6.2: Develop TSM for Rice	Mon 10/31/16	Fri 3/31/17
2.2.1.1.1.6.3: Develop TSM for Lentil	Sat 4/1/17	Tue 10/31/17
2.2.1.1.1.6.4: Develop TSM for Tomato	Mon 10/31/16	Fri 3/31/17
2.2.1.1.1.6.5: Develop TSM for Onion	Sat 4/1/17	Tue 10/31/17
2.2.1.1.1.6.6: Develop TSM for cauliflower	Sat 4/1/17	Tue 10/31/17
2.2.1.1.1.6.7: Train CDD(MOAD) staff on online farm advisory	Sat 4/1/17	Sun 12/31/17
2.2.1.1.1.7: Train seed partners on business capacity development	Sun 1/1/17	Sun 1/15/17
2.2.1.1.1.7.1: Workshop on good seed business practices	Sun 1/1/17	Sun 1/15/17
2.2.1.2: ISFM and the '4rs' of fertilizer management scaled through dealers, retailers, cooperatives, development partners, and backstopped by extension	Fri 4/1/16	Fri 9/28/18
2.2.1.2.1: trainings on ISFM and the 4Rs of fertilizer management conducted for scaling intermediaries (retailers, cooperative leadership, extension, DPS)	Fri 4/1/16	Thu 3/30/17
2.2.1.2.2: New market actors for fertilizer	Mon 10/2/17	Fri 9/28/18
2.2.1.2.3: Support partner-led ISFM demonstrations	Mon 10/2/17	Fri 9/28/18
2.2.1.2.4: Engage social marketing techniques	Mon 10/2/17	Fri 9/28/18
2.2.1.2.5: Support dealer certification	Mon 10/2/17	Fri 9/28/18
Sub-IR2.2.2: Access to financial and business services increased	Sun 5/1/16	Mon 9/30/19
2.2.2.1: Access to financial and business services by seed enterprises increased	Sun 5/1/16	Mon 9/30/19
2.2.2.1.1 Mentoring for development of business plan to source working / growth capital from financial institutions	Sun 5/1/16	Wed 8/1/18
2.2.2.1.1.1: Provide mentorship to seed company partners for developing business plans	Sun 5/1/16	Wed 8/1/18
2.2.2.1.1.2: Facilitate linkages between seed partners and financial institutions	Sun 5/1/16	Wed 8/1/18
2.2.2.1.1.3: Shortlist innovation / venture fund for entrepreneur development	Mon 8/1/16	Sat 12/31/16
2.2.2.1.2: Raising technical capacity of financial institutions to assess agriculture business loan opportunities for DCA partners	Mon 8/1/16	Wed 8/1/18

Task Name	Start	Finish
2.2.2.1.2.1: Organize a workshop to increase awareness among the financial institutions about technical and financial aspects of the seed industry (once in 2 years)	Mon 8/1/16	Wed 8/1/18
2.2.2.1.3: Promote business opportunities in Nepal seed sector to increase investment	Sat 4/1/17	Mon 9/30/19
2.2.2.1.3.1: Design of 'Nepal Seed Business Opportunities' document	Sat 4/1/17	Sun 12/31/17
2.2.2.1.3.2: Facilitate interactive platforms for soliciting investments including joint ventures at national level	Mon 1/1/18	Sat 3/31/18
2.2.2.1.3.3: Facilitating MOAD to organize Seed Business Summit to solicit investments	Sun 4/1/18	Mon 9/30/19
2.2.2.2: Access to financial and business services by fertilizer enterprises increased	Mon 8/1/16	Wed 8/1/18
2.2.2.2.1 Access to credit (including linking to DCA) increased to support new fertilizer investments by the private sector	Mon 8/1/16	Wed 8/1/18
IR2.4: Economic growth policy and performance improved	Wed 6/1/16	Wed 3/31/21
Sub-IR2.4.1: Increased access to markets	Wed 6/1/16	Wed 3/31/21
2.4.1.1: Seed demand and market characterization studies completed and support public and private investments	Wed 6/1/16	Thu 12/31/20
2.4.1.1.1: Assess stakeholders' perceptions on hybrids/opvs identified by the project (indicators disaggregated by different socio-economic parameters, including farm size, ethnicity and gender)	Mon 8/1/16	Tue 2/28/17
2.4.1.1.2: Conduct a study of seed market potential in target districts, and a recurrent survey for seed market and use cases	Sat 10/1/16	Thu 12/31/20
2.4.1.1.3: Recurrent seed use and sales surveys provide robust analytics on spatial and temporal progression of market development	Wed 6/1/16	Fri 3/31/17
2.4.1.1.3.1: Conduct Year 1 seed use and sales survey	Wed 6/1/16	Fri 3/31/17
2.4.1.1.3.2: Yield, economic, and HH welfare outcomes with use of improved and quality seed	Wed 6/1/16	Fri 3/31/17
2.4.1.2: Market-responsiveness of seed development and distribution enhanced through a national Seed Sector Information System	Sat 10/1/16	Wed 3/31/21
2.4.1.2.1: Support MOAD in setting up a seed sector information system (SSIS)	Sat 10/1/16	Wed 3/31/21
2.4.1.2.1.1: Conduct a survey to understand the requirements of different seed system value chain stakeholders for the seed information system	Sat 10/1/16	Sat 12/31/16
2.4.1.2.1.2: Generate a report describing the system requirements, including content, reporting formats, accessibility, etc. plus SSIS vision	Sat 10/1/16	Sat 12/31/16
2.4.1.2.1.3: Validate outputs of the SSIS portal prior to its commissioning by SQCC and MOAD under the G2G activity	Sun 1/1/17	Mon 7/31/17
2.4.1.2.1.4: Train on web portal & applications	Sun 4/1/18	Wed 3/31/21
2.4.1.3: Fertilizer demand, welfare outcomes, and market characterization studies completed and support public and private investments	Wed 6/1/16	Sat 3/31/18
2.4.1.3.1: Willingness to pay for fertilizers assessed as a function of agronomic 'literacy', fertilizer price / quality, and farmer type - including risk perception	Sat 10/1/16	Fri 3/31/17

Task Name	Start	Finish
2.4.1.3.2: Functional farmer typologies developed with respect to incentives and capacity for intensification of maize, rice, and wheat	Sat 10/1/16	Fri 3/31/17
2.4.1.3.3: Recurrent fertilizer use and sales surveys provide robust analytics on spatial and temporal progression of market development	Wed 6/1/16	Fri 3/31/17
2.4.1.3.3.1: Conduct Year 1 fertilizer use and sales survey	Wed 6/1/16	Fri 3/31/17
2.4.1.3.4: Yield, economic, and household welfare outcomes with 'recommended' and evolving farmer fertilizer practices assessed	Sat 4/1/17	Sat 3/31/18
2.4.1.3.5: Support MOAD in setting up a Fertilizer Information System (FIS)	Sat 4/1/17	Sat 3/31/18
2.4.2: Private sector service delivery improved	Mon 8/1/16	Tue 3/31/20
2.4.2.1: Seed association capacity strengthened to provide business development services and to effectively represent the seed industry	Mon 8/1/16	Mon 12/31/18
2.4.2.1.1: provide technical support to SEAN and other seed associations to increase their capacity to provide members with desired services	Thu 12/1/16	Fri 3/31/17
2.4.2.1.1.1: Train SEAN secretariat staff in business development services	Thu 12/1/16	Fri 3/31/17
2.4.2.1.2: Facilitate MOUs between SEAN and Asia & Pacific Seed Association (APSA), International Seed Federation (ISF) and Bangladesh Seed Association (BSA)	Sat 10/1/16	Fri 3/31/17
2.4.2.1.2.1: Broker an MOU between SEAN and APSA	Sat 10/1/16	Fri 3/31/17
2.4.2.1.3: Facilitate extension of the existing trilateral agreement between South Asian Association for Regional Cooperation (SAARC) countries on harmonization of release of rice varieties to maize and lentils	Mon 8/1/16	Mon 12/31/18
2.4.2.1.3.1: Consult with stakeholders on the proposed agreement	Mon 8/1/16	Fri 3/31/17
2.4.2.1.3.2: Draft agreement for maize and lentil	Sat 4/1/17	Sat 3/31/18
2.4.2.1.3.3: Facilitate implementation of agreement following official approval	Sun 4/1/18	Mon 12/31/18
2.4.2.2: Fertilizer supply chains and markets strengthened through private sector engagement, policy experiments, and public-private partnerships	Sat 4/1/17	Tue 3/31/20
2.4.2.2.1: Policy support provided to MoAD to draft a proposed Fertilizer Act and to assess (+ pilot?) options for re-structuring subsidy support	Sat 4/1/17	Tue 3/31/20
2.4.2.2.2: Convene a strategic roundtable with MOAD and aligned projects (Policy Reform Initiative Project, CSISA) to consider GON responses to a changed policy environment in India	Sat 4/1/17	Sat 3/31/18
2.4.2.2.3: Facilitate formation of the Fertilizer Association of Nepal (FAN) and dialogue with public sector counterparts, FNCCI, and regional partners	Sat 4/1/17	Sat 3/31/18
Cross-cutting activities	Fri 4/1/16	Wed 3/31/21
MEL: Monitoring, Evaluation and Learning	Sun 5/1/16	Wed 3/31/21

Task Name	Start	Finish
MEL#1: Develop ME&L plan	Sun 5/1/16	Thu 6/30/16
MEL#2: Develop data collection and management systems	Wed 6/1/16	Fri 9/30/16
MEL#3: Train staff and partners on ME&L systems	Fri 7/1/16	Fri 9/30/16
MEL#4: Routine monitoring and data collection for feedback	Wed 6/1/16	Wed 3/31/21
MEL#5: Spot checks and Data Quality Assessment (DQA)	Sat 10/1/16	Mon 5/1/17
MEL#5.1: Y1 semiannual internal DQA	Sat 10/1/16	Mon 10/31/16
MEL#5.2: Y1 annual internal DQA	Sat 4/1/17	Mon 5/1/17
MEL#6: Geo-enabled data collection designed and implemented	Wed 6/1/16	Fri 9/30/16
MEL#7: Data entered into USAID databases	Fri 7/1/16	Sun 4/30/17
MEL#7.1: Data entered into FTFMS	Wed 3/1/17	Fri 3/31/17
MEL#7.1.1: Year 1 data uploaded	Wed 3/1/17	Fri 3/31/17
MEL#7.2: Data entered into TraiNet system	Fri 7/1/16	Sun 4/30/17
MEL#7.2.1: 2016 Q2 data uploaded	Fri 7/1/16	Sun 7/31/16
MEL#7.2.2: 2016 Q3 data uploaded	Sat 10/1/16	Mon 10/31/16
MEL#7.2.3: 2016 Q4 data uploaded	Sun 1/1/17	Tue 1/31/17
MEL#7.2.4: 2017 Q1 data uploaded	Sat 4/1/17	Sun 4/30/17
MEL#7.3: Data entered into AT+	Sat 10/1/16	Mon 10/31/16
PM: Project Management Activities	Fri 4/1/16	Wed 3/31/21
PM#1: Develop key project planning deliverables	Fri 4/1/16	Sat 7/30/16
PM#1.1: Develop Disaster Management Plan	Fri 4/1/16	Sat 7/30/16
PM#1.2: Develop Environmental Monitoring and Mitigation Plan	Fri 4/1/16	Sat 7/30/16
PM#1.3: Develop Gender and Social Inclusion plan	Fri 4/1/16	Sat 7/30/16
PM#1.4: Develop Y1 Annual Work Plan	Fri 4/1/16	Thu 6/30/16
PM#2: Implement Branding and Marking Plan	Mon 8/1/16	Fri 3/31/17
PM#2.1: Develop and distribute properly branded templates and ensure all staff/partners understand branding/marketing requirements	Mon 8/1/16	Wed 8/31/16
PM#2.2: Generate awareness about NSAF	Mon 8/1/16	Fri 3/31/17
PM#3: Implement staffing plan	Fri 4/1/16	Fri 9/30/16
PM#3.1: Recruitment	Fri 4/1/16	Sat 7/30/16
PM#3.2: General orientation and onboarding	Mon 8/1/16	Thu 9/29/16
PM#3.3: Establishment of Field Offices	Sun 5/1/16	Fri 9/30/16

Task Name	Start	Finish
PM#4: Conduct planning and consultation workshops	Fri 4/1/16	Sat 4/30/16
PM#4.1: Year 1 planning workshops	Fri 4/1/16	Sat 4/30/16
PM#5: Manage partner contracts	Fri 4/1/16	Wed 3/31/21
PM#6: Establish Project Governance mechanisms	Wed 6/1/16	Sun 4/30/17
PM#6.1: Establish Project Management Committee (PMC)	Wed 6/1/16	Fri 3/31/17
PM#6.1.1: Develop PMC Terms of Reference	Wed 6/1/16	Sun 7/31/16
PM#6.1.2: Hold bi-monthly meetings - Year 1	Fri 7/1/16	Fri 3/31/17
PM#6.2: Establish Project Advisory Committee (PAC)	Wed 6/1/16	Sun 4/30/17
PM#6.2.1: Develop PAC Terms of Reference	Wed 6/1/16	Sun 7/31/16
PM#6.2.2: Year 1 PAC meeting	Sat 4/1/17	Sun 4/30/17
PM#6.3: Establish NSFP & GON Coordination Committee (CC)	Wed 6/1/16	Fri 3/31/17
PM#6.3.1: Develop CC Terms of Reference	Wed 6/1/16	Sun 7/31/16
PM#6.3.2: Hold regular CC meetings (semi-monthly in Apr & Oct, otherwise monthly) - Year 1	Fri 7/1/16	Fri 3/31/17
PM#7: Develop and implement procurement plan	Fri 4/15/16	Wed 6/29/16
PM#7.1 Compile and submit 2016 CAPEX procurement requests for approval	Fri 4/15/16	Wed 6/29/16

6.4 ANNEX 4 DATA QUALITY ASSESSMENT CHECKLISTS

Activity Name:	
Implementing Organization: International Maize and Wheat Improvement Center (CIMMYT)	
Title of Performance Indicator: [Indicator should be copied directly from the Performance Indicator Reference Sheet]	
Data Source(s): [Information can be copied directly from the Performance Indicator Reference Sheet]	
Period for Which the Data Are Being Reported:	
Is This Indicator a Standard or Custom Indicator?	<input type="checkbox"/> Standard Foreign Assistance Indicator <input type="checkbox"/> Custom (created by the Activity; not standard)
Data Quality Assessment methodology: [Describe here or attach to this checklist the methods and procedures for assessing the quality of the indicator data, e.g. Reviewing data collection procedures and documentation, interviewing those responsible for data analysis, checking a sample of the data for errors, etc.]	
Date(s) of Assessment:	
Assessment Team Members:	
Activity Implementation Partner Verification of DQA	

<p>Team Leader Officer approval</p> <p>X_____</p>

Criteria		Yes	No	COMMENTS
VALIDITY – Data should clearly and adequately represent the intended result.				
1	Does the information collected measure what it is supposed to measure? (E.g. A valid measure of overall nutrition is healthy variation in diet; Age is not a valid measure of overall health.)			
2	Do results collected fall within a plausible range?			
3	Is there reasonable assurance that the data collection methods being used do not produce systematically biased data (e.g. consistently over- or under-counting)?			
4	Are sound research methods being used to collect the data?			
RELIABILITY – Data should reflect stable and consistent data collection processes and analysis methods over time.				
1	When the same data collection method is used to measure/observe the same thing multiple times, is the same result produced each time? (E.g. A ruler used over and over always indicates the same length for an inch.)			
2	Are data collection and analysis methods documented in writing and being used to ensure the same procedures are followed each time?			

Criteria		Yes	No	COMMENTS
TIMELINESS – Data should be available at a useful frequency, should be current, and should be timely enough to influence management decision making.				
1	Are data available frequently enough to inform program management decisions?			
2	Are the data reported the most current practically available?			
3	Are the data reported as soon as possible after collection?			
PRECISION – Data have a sufficient level of detail to permit management decision making; e.g. the margin of error is less than the anticipated change.				
1	Is the margin of error less than the expected change being measured? (E.g. If a change of only 2% is expected and the margin of error in a survey used to collect the data is +/- 5%, then the tool is not precise enough to detect the change.)			
2	Has the margin of error been reported along with the data? (Only applicable to results obtained through statistical samples.)			
3	Is the data collection method/tool being used to collect the data fine-tuned or exact enough to register the expected change? (E.g. A yardstick may not be a precise enough tool to measure a change of a few millimeters.)			
INTEGRITY – Data collected should have safeguards to minimize the risk of transcription error or data manipulation.				
1	Are procedures or safeguards in place to minimize data transcription errors?			
3	Is there independence in key data collection, management, and assessment procedures?			
3	Are mechanisms in place to prevent unauthorized changes to the data?			

Summary
Based on the assessment relative to the five standards, what is the overall conclusion regarding the quality of the data?
Significance of limitations (if any):
Actions needed to address limitations prior to the next DQA (given level of USG control over data):

If no data are available for the indicator:	Comments
If no recent relevant data are available for this indicator, why not?	
What concrete actions are now being taken to collect and report these data as soon as possible?	
When will data be reported?	

6.5 ANNEX 5: GLOSSARY

Adoption: Adoption is the use of technology or management practice by a farmer or other beneficiary in a sustainable way over an extended period of time. The fact that farmers or other beneficiaries have applied a technology or management practice for a year or two does not mean that they have sustainably adopted it – or will continue to do so after a project ends. “Adoption” may best be determined through an assessment conducted several years after completion of activities.

Application: Application is the use of technology or management practice by a farmer or other producer over at least one crop season or equivalent production period in the case of livestock or fisheries. Sustained application of a technology or practice over an extended period of time would be required before it could be established whether the technology or practice has been adopted.

Agro-dealer: a small scale agricultural inputs retailer such as seeds, fertilizers, pesticides etc. in rural communities.

Fertilizer: describes both organic and inorganic (chemical) fertilizers that are added to the soil to improve soil fertility and help the growth of plants.

Private sector: “The part of the economy that is not state controlled, and is run by individuals and companies for profit [registered in the Company Registrar Office or in the Department of Cooperatives in Nepal]. The private sector encompasses all for-profit businesses (including cooperatives) that are not owned or operated by the government. Companies and corporations that are government run are part of what is known as the public sector, while charities and other nonprofit organizations are part of the voluntary sector.”

Seed Company: an organized seed operator that has its own seed production, marketing, and research and development (R&D) strategy.